SELECTIONS

FROM THE

RECORDS OF THE GOVERNMENT

OF THE

PUNJAB AND ITS DEPENDENCIES.

NEW SERIES—NO. XVII.

NOTE

ON THE

SYSTEMS OF FLUCTUATING ASSESSMENTS IN THE PUNJAB.

Lahore:

PRINTED AT THE PUNJAB GOVERNMENT CIVIL SECRETARIAT PRESS.

1880.

Digitized with financial assistance from

H T Parekh
FOUNDATION

An Initiative by
HDFC
WITH YOU, RIGHT THROUGH

on 10 January, 2019

SELECTIONS

FROM THE

RECORDS OF THE GOVERNMENT OF THE PUNJAB.

NEW SERIES—NO. XVII.

NOTE

ON THE

SYSTEMS OF FLUCTUATING ASSESSMENTS IN THE PUNJAB.

Selection of Extracts from Assessment Reports and other papers on the subject of systems of fluctuating assessments in the Punjab.

THE extracts from the Government Office Records collected in this volume have been put together to show the history of the measures proposed and taken in the direction of fluctuating assessments in the Punjab. The collection begins with papers taken from the discussion on the assessment of canal-irrigated lands with water-advantage rates. This question had at the time reference to the Bari Doab Canal only, but the results arrived at led in a large degree to the passing of Act VIII. of 1873, and the imposition of the charge known as owners' rate. There is a natural transition from this subject to the kindred question of fluctuating assessments on the lands irrigated by the Sutlej Inundation Canals in the Pakpattan and Dipalpur tahsils, which was the next that occupied the attention of the Punjab Government. The system sanctioned there is known as the Montgomery method, and under this name has gained some notoriety. The treatment of the revenue of the lands affected by the river floods in the same district follows in due course on this, and the varied treatment of the same subject is traced through the districts of the Multan and Derajat divisions. The chronological order in which the references concerned arose and orders were passed is of necessity slightly sacrificed to this arrangement, but there are other compensating advantages in it. Finally, certain proposals which were made for the assessment of tracts where the rain-fall is scanty or notoriously uncertain, are referred to. The districts concerned

by the extracts (except in the case of the Bari Doab Canal) show an average rain-fall for the last 17 years as follows:—

		Inches
1.	Montgomery	11·5
2.	Multan	7·4
3.	Muzaffargarh	6·6
4.	Jhang	12·2
5.	Dera Ismail Khan	8·9
6.	Bannu	14·1
7.	Dera Ghazi Khan	8·0
8.	Tahsil Muktsar, Ferozepore	12·5
9.	Rohtak	19·5

The detailed arrangement of the subject is as follows:—

	Page.
I.—The water-advantage rate of the Bari Doab Canal ...	3
II.—Extract from Review of Revenue Report of 1871-72 ...	46
III.—Assessment of lands irrigated from the inundation canals, Montgomery	48
IV.—The same, and arrangements made for revenue of river-side estates, Montgomery	69
V.—Fluctuating revenue of canal and river-side lands in Multan	80
VI.—The same in Muzaffargarh	93
VII.—River-side lands in Jhang and Bar wells ...	97
VIII.—Fluctuating assessments in Dera Ismail Khan ...	126
IX.—The same in Bannu	143
X.—Discussion in Dera Ghazi Khan	149
XI.—Proposals made for Muktsar, Ferozepore	153
XII.—Extracts from Assessment Reports of Rohtak ...	157

The above selections show that in six districts forming the south-west corner of the Punjab, with a rain-fall of not more thon 12 inches per annum, except in one case, and in which the crops depend chiefly on wells, inundation canals and the summer floods of the rivers, systems of fluctuating assessments, varying in detail according to local necessities and circumstances, have been more or less extensively introduced. The method adopted in each case will be found fully explained in the extracts themselves.

H. C. FANSHAWE,

Under Secretary to Government, Punjab.

EXTRACT No. I.

ASSESSMENT OF CANAL-IRRIGATED LANDS WITH WATER-ADVANTAGE RATE.

[These extracts have already been published as a selection from the records of the office of the Financial Commissioner, No. XXXVIII.—H.C.F.]

Extract of a letter No. 253, *dated* 24*th April* 1863, *from the Financial Commissioner, Punjab, to Secretary to Government, Punjab.*

I BEG to forward in original, for the consideration and orders of His Honor the Lieutenant-Governor, the correspondence noted in the margin, regarding the discontinuance of canal irrigation by zamindars with the view of securing light assessments at the revised settlement, and to enquire whether Government is prepared to admit the principle that whatever enhancement of revenue shall be demanded in consequence of irrigation from the canal, shall be levied *exclusively* in the shape of water rent. It seems to me that this principle is the only just one, and if it be adopted, it seems desirable that it be avowed at once, in order to obviate the evil which Captain Dyas points out.

No. 1976, dated 19th ultimo, from Director of Canals, to Financial Commissioner.
No. 1097, dated 1st current, from Financial Commissioner, to Settlement Commissioner.
No. 123, dated 8th idem, from Settlement Commissioner, in reply.

2. I believe that irrigation from wells may, with advantage, be treated on the same principle; but there is no urgent occasion at present for orders on this point, and I do not solicit any, as the subject is not yet ripe for disposal.

Extract of a letter No. 418, *dated* 12*th May* 1863, *from Assistant Secretary to Government, Punjab, to Financial Commissioner, Punjab.*

I AM directed to reply as follows to your letter No. 253, dated the 24th ultimo, the original enclosures of which are returned herewith.

2. The Lieutenant-Governor has also consulted Messrs. Cust and Forsyth on the subject of your communication,

and all seem to be agreed on the propriety of the land revenue being assessed at unirrigated rates, and the enhanced demand in consequence of irrigation from the canal being levied in the shape of water-rent. His Honor himself also concurs in this view, and authorizes the adoption of the principle accordingly. At the same time, however, it is necessary that the water-rent rates should be enhanced, so that although the land revenue will be diminished, yet no loss may accrue to the Government by this change in the mode of settlement.

Copy of a letter No. 310., dated 6th July 1865, from the Chief Engineer, Irrigation Works, and Under-Secretary to Government, Punjab, to the Financial Commissioner, Punjab.

THE jamas of the new land settlement at unirrigated rates in the Lahore and Amritsar Divisions being on the eve of publication (in some instance they have, it is understood, been already published), it becomes necessary to make some arrangement for realizing the portion of the aggregate Government demand relinquished by the change from irrigated to unirrigated rates which will fall due in the interval which may elapse before the enhanced rates for the irrigation can be finally determined on.

2. To effect this, the Settlement Commissioner, Mr. E. A. Prinsep, proposes "that a rate be fixed over and above the present water rate, to be made now by (him) when (he) fixes the new jama, and engagements be taken from zamindars that until the new enhanced (water) rates are generally introduced, they will pay at that rate for every acre they may choose to water."

To this proposition His Honor the Lieutenant-Governor agrees, believing it to be the best, if not the only feasible arrangement under the circumstances. I have therefore the honor to request the favor of your issuing such orders as you may consider necessary to give effect to the arrangement by the time the new assessment comes into practical operation, forwarding at the same time a copy of such instructions, or such portion of them as affect the Irrigation Department, to this office.

Paper urging the desirability of assessing land watered by canals on the principle of fixing water rates over and above existing rates paid for the use of water, being the plan introduced in Bari Doab Settlements by E. A. PRINSEP, *Esquire, Settlement Commissioner, recorded in his No.* 215, *dated* 20*th April* 1867, *to address of Financial Commissioner, Punjab.*

I HAVE to acknowledge receipt of your No. 629, dated 8th February, and its enclosures from Government of India and from the Secretary to Government, Punjab, regarding the mode in which the indirect benefits, or increase of assessment, resulting from canal irrigation, are to be dealt with; and calling upon me to give effect to the principle laid down by the Governor-General in Council in all future revisions of settlement now being conducted.

2. As regards the districts of Amritsar Division, where the new assessments have been given out, I am directed to revise the arrangements made on another principle.

3. Now, that I have returned to Amritsar from my tour of inspection, I am ready to take up this duty. It requires me simply to go over the ground again in perhaps no less than 1,500 villages in two districts of Amritsar and Gurdaspur, where the assessments have been fixed on land *entirely in an unirrigated aspect*; the increased fertility due to the canal being left out of account till such steps had been taken by Canal Department to introduce generally the enhanced water rates, which for some time back it has been proposed to bring into operation. I left the increase of assessment to be dealt with when these rates were fixed, as it was most important that the two enquiries should take place at one and the same time; for the enhancement, whether taken by Canal Officers in the shape of an increased water rate or fixed by Settlement Officers in the shape of an increased amount of revenue, could only be demanded from that margin of enhanced profits which can be defined by the term "water-rent" profits; and being drawn from one and the same source by two distinct operations, it was absolutely necessary that the fixation of new water rates and water-revenue rates should be done simultaneously, and under arrangements mutually understood by both Canal and Settlement Departments.

4. I must premise here that by order received in His Honor the Lieutenant-Governor's No. 418, dated 12th May

1863, to your address, the principle of assessing all lands *as unirrigated*, and fixing separate and enhanced waterr ates for increased productiveness caused by the canal, was duly affirmed.

5. Again, in the reference made by me, a reply, No. 31C., dated 6th July 1865, was elicited from Chief Engineer, Irrigation Works, to your address, in which the extension of this principle was approved, as suggested by me, "that a rate be fixed over and above the present water rate, to be made out (now) when he (Settlement Officer) fixes the new jama, and engagements be taken from zamindars that, until the new enhanced (water) rates are generally introduced, they will pay at that rate for every acre they may choose to irrigate." His Honor the Lieutenant-Governor "believed this to be the best," if not the only feasible arrangement under the circumstances, and directed it to be carried out.

6. Wherever then it was ascertained that at last settlement Mr. Davies had assessed the increased profits due to the canal then in existence as a part of the land revenue the proportion discovered to be due to the canal was converted into a *rate per acre*; and at time of announcement of new jamas it was duly given out and entered in the engagements that this additional rate was to be paid for every acre of land watered over and above existing canal-water rates,—at any rate until such time as enhanced rates were generally introduced or further orders were issued.

7. However, it is proper to explain that this arrangement has in Amritsar and Gurdaspur districts only been carried out in those estates which *were watered from Hasli Canal*; for it was in these alone that at last settlement any water was taken, and Mr. Davies included both under one jama, *viz.*, revenue due to land and that to water, the Bari Doab Canal not being then open in any portion of its length or channels.

8. Since that settlement, of course most of the villages have received water from the Bari Doab Main Canal and its branches. At the utmost, irrigation from this new source has only had an existence of from 4 to 6 years in Gurdaspur, and 1 to 4 years in Amritsar. It occurred to me, then, not to fix the extra rate for these villages till the new enhanced water rates, which the Canal Department had under

consideration, (and, I believe, are still considering), had been brought out ; for it is manifest (as explained above) that the Settlement Officer must have full regard to what is going to be taken as a canal-water rate before measures can be taken to adopt those rates, or that proportion of the net assets which the extra margin of profits due to water alone affords.

9. This will explain why I have resorted to two different modes of assessing : on the Hasli villages, fixing the additional rate, because the jama had to be reduced to the unirrigated aspect (and it was not right to surrender whatever amount of the old jama was, as it were, chargeable to the canal and previously paid into treasury) ; while in all other irrigated estates, water had only recently been taken, the irrigation system had scarcely been matured (in many villages had only just begun), and even the arrangements of the Canal Officers were altogether in a transition state.

10. The course that has now to be taken will be twofold :—

I.—To collect at once, if not already collected, the extra jama by application of the additional rates fixed on the Hasli villages on the entire area of *the year*, as appears from the Canal Officer's papers. All these rates were fixed in the new kistbandis sent to Commissioner of Division, with the letters marginally noted, and Deputy Commissioners were requested to see that the extra revenue was collected on the Canal Officer's area returns, over and above the usual collections on the existing water rates of the Canal Department.

(1). Settlement Commissioner's No. 556, dated 15th February 1866.
(2). Settlement Commissioner's No. 558, dated 19th February 1866.

11. I learn from Mr. Egerton that from some oversight and misunderstanding on the part of the Canal authorities this extra revenue has not been collected. The amount is not large.

Parganna Batala,	...	Rs. 6,658
„ Gurdaspur,	...	„ 5,490
„ Pathankot,	...	„ 5,069
Total		„ 17,217

I reported what it would come to in paragraph 46 of my annual report for 1865-66. It will be seen that it was estimated to amount to Rs. 17,217 only.

There are only 131 villages in all from which this has to be collected in the proportion of estates to each parganna as marginally shown.

District.	*Parganna.*		*Villages.*	*Total.*
Gurdaspur,	Pathankot,	...	33	
Do.,	Gurdaspur,	...	44	
Do.,	Batala,	...	53	
				130
Amritsar,	Ajnala,	...	1	1
		Total,		131

Mr. Egerton, however, now informs me that he has issued orders for these additional rates to be applied on the area returns, and the revenue to be collected separate from Canal Officer's water-rate jamas. When collected, it can be at once carried to credit of Land Revenue or Canal Department, as Punjab Government shall hereafter think fit to direct.

12. II.—The other step we have now to take is to fix in every remaining village watered by *Bari Doab Canal*, not the additional rate, as under the principle previously followed and approved, but the amount of jama which represents half the net assets of the increased margin of profits due to canal irrigation, which shall now be added to the unirrigated jama, and the two will in future form the enhanced land revenue in all these villages.

13. This comes to be a very serious enquiry; and as the principle laid down by Supreme Government has not been given in detail, before I take positive action in the way of announcing the new water jamas, I deem it right to take explicit instructions on each of the following points :—

1*st*.—As to principles which I wish to have enunciated, as, though in the correspondence the system is defined to be the existing system, such definition may be applicable to North-Western Provinces, where the canals are older; but up here the new canal has only very recently been opened. The enforcement of the system is one altogether new up in these parts, and we have a *tabula rasa*.

2*nd*.—As to the agency by which this should now be done.

14. As regards the first, I wish to be informed—(1) Whether it would not be desirable to fix the enhanced jama more in the form of a rate per acre for each village than simply a round amount, short of revenue-rate jama, for

water at half net asset rate? The object of this suggestion being this: that if His Honor the Lieutenant-Governor should wish to make any reference to Government of India, and any deviation be eventually allowed from the principle at present enjoined, it will at any time be easy to revive the acreage-rate plan in separating (1) what shall be for the *use of canal water*, and (2) what for the *additional productive advantages*. If such separate considerations are not now elicited and in form of rates, quite apart from the land revenue already announced, there is a fear that hereafter it will be extremely difficult to separate the two aspects on the water side.

15. (2.)—Whether the *existing canal-water rates** are to stand as they are, or are they to be enhanced?

16. (3.)—If not, whether the new canal-water rates are to be permanent for the term of new settlement, or are liable to fluctuation hereafter, even within the period for which settlement is to be given?

17. (4.)—Whether there are to be different canal rates for crops of different kinds, constant when fixed for the whole length of the Doab, or varying again in degree within defined territorial limits, such as in Gurdaspur District one set of rates; Amritsar District another; Lahore and Chunian somewhat lower rates, owing to the uncertainty of supply in water?

Before I can move one step in my enquiries, I must know these rates and the terms on which they will be fixed, for the people are sure to enquire when I announce; and if they are not taken into account in that consideration of the increased gross income created by increased productiveness, how can I deduct the net rental properly, out of which the extra one-half assets are to be imposed, and from which again, or above which, so much is to be set apart as the margin for present canal rates (or for canal rates in future likely to be taken), and so much for the land revenue under the principle enjoined by His Excellency in Council in the improved productive aspect?

18. (5.)—Then I wish distinctly to be informed whether the present canal-water rate, or the enhanced one, which is,

* By canal-water rates are meant, throughout this report, the rates taken by Canal Department for the *use of the water*

or is about to be, fixed by that department for *the use of the water*, is to be taken into consideration in the half net asset margin of profit taken as the share of Government, or to be excluded as payable from the landowner's half share. It is important that I should know this before I deduce what shall form the fair proportion of new jama on the land revenue side. Or is this canal rate and its value to be deducted as an agricultural charge from *both shares*, Government and landowner's, and, being so deduced, of the remainder Government is to take half and landowner half? The whole question is a new one up here, and general principles such as these must be enunciated.

19. (6.)—If we do not take into account existing canal-water rates, or what Canal Officers are likely to put on, is there not a great fear of over-taxing the villages from the double process of enhanced land revenue, settled on the district side now, and the imposition of existing or enhanced water rates the Canal Officers may now or hereafter demand?

20. (7.)—If the two processes are done once and for all now, how is this to be done? Are Settlement and Canal Officers to work it out together, or the former quite independent of the latter? I foresee much trouble, complaint, and even refusal to accept Settlement Officer's data, unless both departments work together.

21. (8.)—Again, how is unequal taxation to be provided against? A village has 200 acres irrigated now, and we assess, say, even by double process; but it is presumed this is to be done *on area at present watered*; six years hence some villages may be watering 400 acres, the Canal Department being allowed to take only a more use of the water rate; how will this increased area ever be rated uniformly, either in its aspect of *taxes to the State* or of village interest? How is the internal rating in the villages to be adjusted? Government having made its settlement now, cannot put on a demand *during the term of a settlement* for share of improved assets on increased watered area. How very unequal then will be the taxation all over the country, even to extent of villages side by side, and fields of two brothers side by side, one of whom happens to irrigate now, the other perhaps two years hence! What loss to Government! What disturbance of yearly internal rating (*bach*)!

Granted that Government is ready to give up this increase of canal revenue for a term of settlement; but how about the village rating? Is that to be settled every year there is decrease or increase of area under water? Where is the agency to make up yearly papers? The village representatives will never be able to do it; the patwaris, if left alone, would create mischief; tahsildars have not the time to do it. If *village rating is to change every year*, the good of a settlement for a fixed period is frustrated; complaints will become very frequent; and our Revenue Officers' time will be distracted by adjustment of water quotas of each year's demand.

The questions I wish to put then under this head are:—

(*a.*) Is any prospect to be held out to the people of adjustment of unequal taxation? Are those who are taking water now and are rated for the same to be always the rate-payers of that quota?

(*b.*) Or, as watered area increases from year to year, is the water-revenue jama now fixed for (20) *twenty years on present area* to be liable to adjustment on fluctuating areas of each year, in order to afford equal taxation within villages? In other words, is village rating liable to change, and if so, are new khewuts to be prepared every year?

22. (9.)—Again, if there are differential rates of any kind for crops, or territorial division fixed by Canal Department, or by Settlement Department, wherefrom to deduce the water-revenue jama, is a separate operation to be gone through to arrive at water-revenue rate for each crop, soil, or rajbaha? Even supposing this is done now, once and for all, for 20 years, as far as the Government demand is to be eliminated, how about future years' imposition of water rate by Canal Department, or what about the village rating? Are these to be altered every year and adjusted on each rate-payer's fields, with reference to the crop, soil, or position in respect to vicinity to or distance from rajbaha? I am not raising questions merely to add to our difficulties; but this very question has been put to me by parties interested. They say the enquiry involved by such yearly changes will be attended with most mischievous results and be destructive of all the advantages of a settlement for any term, however short or long, or permanent in character.

23. (10.)—Then comes the question, and it is a most important one which must be explained from the outset to the people,—are zamindars obliged to engage to pay the water-revenue jama? Is *payment inevitable or optional on water being taken*? Suppose the canal is closed, or supply of water fails (this is occurring every day, and remissions of canal-water rate are constantly being given by Canal Officers to prevent loss), and the water-revenue jama is fixed for 20 years, people object and enquire whether the obligation to give water and (failing water) remissions is as equally binding on the State as payment of enhanced jama, now fixed for 20 years, is binding on zamindars? If there is no option as to taking water hereafter, and payment is obligatory without corresponding obligation of remission on part of Government, I very much fear, when we come to announce this, there will be universal dissatisfaction in a new country like the Punjab. Indeed, it is already feared that the very announcement may induce some villages to decline to engage on these conditions altogether, either for water-revenue, or the land-revenue jama previously accepted. Orders of Government are accordingly required, for Settlement Officers must be ready to meet any question put on this head at time of announcing jama.

24. (11.)—If refusals are made to take up jama on these conditions, what course is to be adopted? It would be better, in my opinion, to record a declaratory proceeding, that for the term of settlement such a village is not to have any water at all, or mischief will arise.

25. (12.)—If a village *does* agree to engage, and hereafter there is a loss of water owing to canal failing in its supply of water, by whom is it to be borne in the village rating? By the whole community jointly? By such as have taken water for that year, the joint interest applying to all alike? Or by individual rate-payers in the proportion of water they have been known to have taken? By what agency is this to be determined, and how is a dispute on such points to be decided hereafter by the Court?

* * * * * * *

27. (13.)—Again, if remissions may be given hereafter, who are to give them, the Canal or District Officer? If both together, it may work; if separately, where is there any guaran-

tee against collision or mistakes of accounts ; perhaps one officer may remit water revenue, the other decline to remit canal-water rate, and here confusion and conflict would arise.

Would it not, on this account then, be better to make out two revenue rates for the two new jamas, one showing the unirrigated as already fixed and announced, the other the canal-irrigated ? If not, when remissions have to be made hereafter, how is Deputy Commissioner to know how much he has to remit, particularly if differential rating on crops has to be applied as a principle of assessment.

28. The above points all need to be cleared up, and principles to be enunciated ; for without them it is extremely difficult to make the zamindars comprehend the present arrangement of Government, and why they are called upon to pay taxation twice, as it were, in the water aspect.

29. I now pass on to the *second* head : the agency to be employed.

I wish to know if some Canal Officer cannot be deputed at once to confer with me on these arrangements. The condition of every village will have to be considered, each on its own merits : the area irrigated ; quality of produce perhaps divided in three or four chief classes ; the number of years water has been taken; and the general ability of people to pay full or partial demand. Nobody can give better information on such points than the Canal Officers, and it is of the greatest importance that some such officer should co-operate and represent the canal interest.

30. If the option is allowed me to select, I should prefer Mr. E. Palmer for many reasons, as he has already taken, I may say, the greatest interest in all that has been done in this settlement ; has been forward in adapting the field maps to the wants of his department—a measure which he is carrying out with much success—and has otherwise evinced a desire to render every help, when help was demanded ; and this serious enquiry we are about to enter upon is one that will need much research, indulgence, and readiness to adapt arrangements to whatever the circumstances of each village may demand at our hands.

31. Mr. Palmer will represent then the canal interest. On the part of the settlement, as I cannot call away any

English officer, and the services of no other officers are available, I propose to depute Extra Assistant Commissioner Gopal Das to help me in collecting the materials. I have summoned him from Gujranwala, and he will begin work on Saturday. I request your sanction to his being employed in this way with a small establishment of four muharrirs on Rs. 20 each, who can be paid from settlement fees, supplemented by the kanungo of each parganna (as we take it up), and this is agreed to by the Commissioner of the Division.

32. This officer will collect and arrange the data, have it translated into the village note books, compare it with canal returns, and, when the data is ready, it will not take me long to assess the villages of four pargannas previously settled by myself; while Mr. Lyall could review the jama of two pargannas, Pathankot and Gurdaspur, which he originally settled.

33. In this way I trust in two months to be able to complete this enquiry and report the results, for there are a large number of villages watered by Bari Doab Canal and its branches, in which, I have stated above, this assessment of canal rate or jama has yet to be carried out. Under any circumstances, I expect in one quarter to do all that is needed in the way of obeying the orders conveyed in your letter.

34. At the same time, I will not conceal from Government that I disagree entirely from the view now enunciated on this question. I consider this step we are taking is full of complications, the extent of which one day will become apparent, and the consequences of which we shall probably regret.

35. The arrangements we had set on foot with the approval of His Honor the Lieutenant-Governor, on the principles mentioned in paragraphs 4, 5 and 6 above, were working very well. There would have been no surrender of existing Government revenue, for we have a *tabula rasa* to deal with. There could have been no future loss, inasmuch as it was proposed to have *an additional rate over and above canal-water rates*, which should be constant for the term of settlement; *and being a rate, would be taken for every acre irrigated*, so that if water was not taken, neither the former nor the additional rate would be demand-

ed, and thus every complication above described would be obviated. While, on the other hand, as the area of irrigation increased from year to year, an additional and increasing revenue would certainly come into the treasury, which could have been credited to Canal Department, or to the land-revenue collections, without the least trouble, without any further interference than is required to collect the ordinary water rate, with uniformity in the incidence of taxation maintained at time of assessment, and always carried on from year to year, without complaint, hardship, or any uncertainty whatever.

36. I am still of opinion that this is the right principle, and just both to the people and the State, and free from any one of the objections and difficulties I foresee will threaten us at every turn, and in the end may lead to impoverishment of some estates, and inordinate prosperity in others, if the change now enjoined is to be carried out.

* * * * * *

38. The main arguments by which the Secretary of State seems to have been influenced are these—

I.—That the principle laid down by Mr. Muir and His Excellency in Council is, after all, only that which "exists under the present system." This is not the case up here, for we have a clear field to do exactly what is the best in principle and safest in practice.

II.—That, quoting from the Resolution of His Honor the Lieutenant-Governor, North-Western Provinces, of the 30th June 1865, the present system is one which is "the matured result of the experience of many years, and is well understood both by officers of Government and by the people." This is not the case up here where the canal system is of only recent creation, has only been six years in anything like open operation, and is not even matured. Nearly every officer is against the amalgamation principle, and sees in the additional water-rate system a way out of every difficulty, secure, impartial, all owing of every liberty of action both to State and people permitting of equal taxation to all alike, and promising

to give a much larger return from canal revenue, and so to show that canal undertakings have every chance of returning a good interest for capital employed in the same; while officers and people would indisputably prefer the plan that does not restrict, or complicate, existing interests, and bids fair to be free of all causes for litigation hereafter.

39. III.—That it would be "*incompatible with the idea of a permanent settlement* to insert conditions in the sanad under which all lands hereafter brought under irrigation should be subjected to the same acreage rate as those already irrigated," is an argument which is easily removed, and scarcely applies to the Punjab, where, owing to the canal system being *new, and water having been taken only from* 3 *to* 6 *years* in most villages, there are few estates which have as yet advanced even up to extent of having 20 or 30 per cent. of their area irrigated by any of the canals; so that for a very long time, at least till the next settlement, none of the villages in Bari Doab can be considered to be in any way fit for a *permanent settlement of the canal demands*. For this term of settlement then, extending to 20 years probably, there can be no objection whatever to fixing a constant additional rate for such period. At the expiry of that term, if there *are* estates so advanced as to have 50, 60 or 80 per cent. of the cultivated area under the full influence of the canal, entitling them to the privileges of this despatch of the Secretary of State, then it may be said that the above objections might apply. But, certainly, taking the facts as we find them in these days, this reason can hardly be allowed to be tenable.

40. I would now like to bring under your attention this important point. By the system laid down for guidance, *future canal revenue is being sacrificed for* 20 *years, and that on a canal where everything has to be matured.* For the last six years, I am informed, the utmost the Bari Doab Canal has returned in shape of interest is 8, or about 12 annas per cent. The revenue derived from water rate realizable from year to year will increase no doubt; but I ask you to reflect

how much in excess would be the material increase of income in shape of interest, if, in addition to that ordinary income for every acre of land hereafter watered, an additional rate of from 12 annas to Rs. 1-4 per acre (probably more on the older villages) was to be supplemented from year to year as a constant and unalterable rate for so long a period. In the face of this lucrative expectation, we are going to surrender this simple mode of enhancing the interest on outlay incurred in canals.

41. What private company would ever come into the field under such restrictions over long periods, which bar the right of levying full returns for capital invested in such expensive undertakings?

42. Another thought is of still more importance. It is just possible there may be changes in the canal lines. Already some officers are of opinion that the branch known as the Lahore Branch should be shut up as far as *irrigation* is concerned, as half the country there is already easily irrigated from wells, and the whole country can be so irrigated. The chief argument is very forcible, that the water can be far better employed if diverted to other lines of the country which are really dry and bleak, have little rain, and where wells are too costly to be made. I certainly share this belief, and have recorded my views in a printed paper, which I will send you. The arguments there advanced will, I doubt not, be allowed to be sufficient to support what I say, that it would, in the prospects of such probable changes, bind our hands by including prospective income in fixed leases, on the land-revenue side for 20 years, in villages along this canal, which Government might hereafter wish to abandon; for once these leases are taken in so many as 500 villages, we shall be unable to change or go forward for 20 years. Government will be fettered and bound to sell water in localities where it is not absolutely needed, and be unable to draw away the supply to perhaps 2,000 estates in Tarn Taran, Lahore and Chunian, which are really exposed to drought and need water from this source, and which, if so watered, might well have a large portion of their areas converted into safe domains for the production of food for man and fodder for cattle.

43. A very similar difficulty may arise if the opinion now on the increase should ever be acted upon, to abandon

giving any water to the villages in the upper divisions of the Doab, which have plentiful rain and can produce crops easily without the aid of this mode of irrigation. If once these leases for water revenue are given for 20 years on reduced areas owing to the canal system not being matured, it will be impossible to carry out any such intentions above described, and so the Government may find itself in a dilemma from which it would be impossible to extricate itself for a period of 20 years; by which time perhaps claims and expectations may arise rendering any changes in the distribution of water extremely difficult of execution.

44. For my part, I am entirely with those who think that we ought to keep the canal water for such tracts only as cannot be easily irrigated in any other way. Already there is not enough water to meet the demands of one-fifth the Doab, and as there are large tracts in the high *banjar* of Amritsar and Tarn Taran, in the Manjha wastes of Lahore and Chunian, and along the arid belt of land which runs the whole way down through the rainless districts of Montgomery and Mooltan, it is, I hold, our first duty, and should be our chief aim, to *irrigate these countries first*, giving only to more favored regions any surplus of water that can be spared. If this view is sound, it would be no matter if the effect of the present enquiries and new assessment now put on should be that the villages of Gurdaspur and Amritsar districts declined to accept the terms. In all such cases, I am not sure it would not be better at once to fix either prohibitory rates or such jamas as would be deemed high, in order purposely to get rid of such engagements, and feel ourselves free to open the Harriki and Kasur branches, and carry the water through these and Mr. Palmer's main canal.

45. A consideration of this kind alone would probably turn the scale as to which is the best, the safest, and the most beneficial principle of assessment of canal-water rent, as far as the wants of this province are affected, in the highest interest of the State, and having regard to the greatest good to the greatest number.

46. I know it will be urged that these difficulties are not so bad as they have been pictured; for has not the plan enjoined been long in existence on the Western Jumna Canal? Granted; but there is this difference, that most of the villages *there* have for many years been *under the full*

influence of the canal, 60, 70 and 80 per cent. of their areas having regularly taken water. In such cases the tendency to inequalities of assessment may not be so great, but I have extreme doubts on this point whether Government, as the capitalist who has laid out enormous sums of money, has really obtained full returns for its outlay. I am informed that even there the proportion of the Government revenue which may be said to be due to the canal, and over and above the canal-water rate, does not exceed 1 rupee an acre, and in many places falls only about 8 and 12 annas an acre, which seems to be exceedingly low, tending to restrict the power of Government from obtaining the full interest for money in comparison with the large amount of water absorbed from these canals.

47. For the above reasons, then, I deem it right to place these observations on record in the hope that the question may be reconsidered. I believe you share the opinion I have formed in many of the points here raised. Very many officers do the same. I think it of the highest importance that Major Crofton should be consulted, and be asked to record his opinion also. I am quite satisfied the principle I have now been called on to carry out is objectionable in many ways, while that which has been introduced is sound and feasible, and should hold good, at any rate, for this term of settlement.

48. I shall be obliged by your recording your opinion and issuing instructions on the above points, as I wish to take action in the matter at once; and as His Honor the Lieutenant-Governor has, in his No. 59, dated 28th January last, consented to receive any remarks I may wish to offer, I request that this report may be submitted for his perusal and consideration as well.

Copy of a letter No. 409, dated 25th July 1867, from E. A. Prinsep, Esquire, Settlement Commissioner, to the Secretary to Financial Commissioner, Punjab.

Subsequent to my letter No. 215, dated 20th April, to your address, I have been engaged in working out rates for the canal-water assessment.

The whole of the statistics of area irrigated by Bari Doab Canal for each year and up to date, the receipts obtain-

ed therefrom by Canal Officers, the extent of land under different kinds of produce during one selected year, 1865, the gross returns of revenue deducible under a fair calculation for a moderate Government demand, and the elimination of reasonable acreage rates over and above the unirrigated aspect, have one and all come under my closest enquiry in the two districts of Gurdaspur and Amritsar.

2. I am now in a position to call your attention to some important points connected with the discussion of that question, whether the North-Western Provinces' system shall be introduced in the Punjab as the method of assessment for canal-watered lands, or whether there are not still stronger arguments for the adoption of what may be termed "the additional acreage system."

3. I find that instead of there being 1,500 villages to be subjected to this assessment, the total number that are registered in Canal Office returns as taking water are only 819.

Gurdaspur	...	259
Amritsar	...	560
Total	...	819

4. The total areas watered in each year up to 1865 are here detailed :—

District.	1859.	1860.	1861.	1862.	1863.	1864.	1865.
Gurdaspur ...	9,662	16,024	22,844	32,670	25,082	22,964	33,098
Amritsar ...	15,856	29,252	55,618	64,682	75,486	73,634	120,619
Total ...	25,518	45,276	78,462	97,352	100,568	96,598	153,717

I have confined my enquiry to the year 1865, as that was a well-watered year, and the produce papers had only been completed up to that year in the Canal Offices.

5. In working out my produce rates, first in the totals of each assessment circle, and then by a back process on each village within that circle, I find that the following standard jamas are deduced as a fair water-revenue rate

at $\frac{1}{6}$th of gross produce as the additional profits obtained by irrigation over and above unirrigated rates :—

District.	Watered area of 1865.	Total cultivated area of some villages.	Percentage of area irrigated on cultivated areas.	Revenue rate jama deduced as standard.	Additional acreage rate deduced.
				Rs.	Rs. A. P.
Gurdaspur	33,098	100,314	33	32,978	1 0 0
Amritsar	120,619	311,483	39	96,171	0 12 8
Total	153,717	411,797	37	129,149	0 13 9

6. The pargannawar details are given in Appendix No. 2. It will be seen that in an area of $1\frac{1}{2}$ lakhs the standard jama points to Rs. 1,30,000 as a fair additional jama for canal advantages, and this falls at a rate of Re. 1 in Gurdaspur and 12 annas 8 pies in Amritsar. Considering that the irrigation in Amritsar and Lahore has yet to be developed, I see no objection to raise the rate there too to Re. 1 an acre all round. This will give us Rs. 1,54,000 in Amritsar Division.

7. The Lahore papers have not yet been made out, but we are informed that there are some 40,000 acres irrigated there, and at same rate of Re. 1 all round we may expect Rs. 40,000 or Rs. 1,94,000 altogether.

8. In actually assessing individual estates, I have no doubt but that the remaining Rs. 6,000 may be made good, and this then will rise to two lakhs exactly.

9. I expect then to raise in this way a new income of some two lakhs of rupees for enhanced profits due to canal irrigation in three districts—Gurdaspur, Amritsar and Lahore.

10. Now the question before Government is, whether we are to assess on the principle pursued in North-Western Provinces, whereby we add this jama of two lakhs to the jama already fixed and announced on the unirrigated aspect and incorporate this as the entire Government demand for a period of 20 years; or whether it is not desirable, on every

consideration, to adopt the principle of a moderate acreage rate fixed once for all for the term of settlement as regards each estate, and let this be applied not only to the 153,717 acres irrigated up to date, but also to the increasing area watered from year to year, in order that many advantages not obtained by North-Western Provinces may be secured by this principle of assessment.

11. My views have already been laid before you; since then I have had further opportunities of discussing both systems with several officers, with the zamindars and experienced revenue officials, with Colonel Crofton, with many of the Canal Officers, and latterly with Colonel Dyas. I have thus elicited all the objections that can be urged against the acreage system. The further I have weighed the *pros* and *cons* the more strengthened I am in the conclusions recorded in paragraphs 34, 35 and 36 of my previous report.

12. I have arranged these arguments in juxtaposition in a supplementary memorandum (Appendix No. 2), copy of which I enclose, with the request that you will place it before His Honor the Lieutenant-Governor, before whom I understand the reference is now under consideration.

13. I wish at the same time to call your earnest attention to the further arguments that are there submitted.

14. There are two points of view in which, to my mind, there can be no question as to which of the two plans it is better for the Government to accept, both in the interests of the people and of the State.

15. In paragraph 40 of my former letter I pointed out "that by the system laid down by the Supreme Government future canal revenue is being deliberately sacrified for 20 years, and that on a canal where everything has to be matured." I am now able to support this statement by a quotation of facts. I find that the loss to Government by not adopting the acreage rate, and taking moderate enhancement on every acre as it is watered from year to year, will amount *within a period of* 20 *years to the enormous sum of half a crore of revenue* at the lowest computation. Appendix No. 3 will show in full detail how I have arrived at this conclusion from the figures and facts that have come before me in my late enquiries. This synopsis explains how I have

begun with present area amounting to two lakhs of acres rated at two lakhs of rupees enchanced revenue in 1865 (at one rupee an acre as additional rate) and, allowing for a ratio of increase in area and receipts for series of four periods of 3, 4 and 5 years, into which I have divided the 20 years, we advance the additional revenue from two lakhs to three lakhs after third year; to four lakhs after another four years; to six lakhs after another five years; and then to seven lakhs during the last five year period of the whole term. This when calculated will bring in a return I estimate *of 96 lakhs in the whole period.* Deducting at the rate of two lakhs per annum, the continuous jama fixed at the outset, according to North-Western Provinces plan, will amount for the same 20 years only to 40 lakhs. The difference of 56 lakhs then is the amount that Government will lose on the Bari Doab Canal alone.

16. If extensions of this canal to the lower rainless districts of Montgomery and Mooltan and the inundation canals of those and other districts are taken into account to enable us to judge the full extent of this principle, there cannot be a doubt that the loss will even increase to 70 and 80 lakhs in this Province alone; while, if other canal systems are included, such as the Jumna and North-Western Provinces Canals, it is no exaggeration to say that at the lowest estimate *the State will be deprived of more than a million of money.*

17. I have gone over the areas and calculations very cautiously. The areas for previous years are specified in the synopsis; I have shown the ratio of increase in past years, and on that analogy I have endeavoured to bring my ratio of increasing receipts to as low a figure as the circumstances and my knowledge of the country and capabilities of Bari Doab Canal will permit. Even then I learn that 56 lakhs of revenue can be secured to Government by the simple system here advocated. I can hardly believe that in these days of financial pressure Government will consent to surrender this, when it is known how easily it can be obtained; and, further, when it has been shown that according to my system the very act of paying this new irrigation tax has the merit of *being purely voluntary.*

18. Though this is undoubtedly a large sum, yet it must be remembered that the collection under such volun-

tary action must be easy. It is entirely dependent on two considerations :—

(1). That there will be water enough in the canal and its branches to irrigate seven lakhs of acres, and of this I have not a doubt if certain measures for selling the water where it is really needed and to the best advantage are carried out.

(2). That the rates fixed by Canal Department hereafter, and now at this settlement, are so moderate as to leave ample margin for profits to the rate-payers. So that the operation of the ordinary law of demand and supply may have free scope and be respected.

I have not a doubt as to my own rate of one rupee, *viz.*, this additional rate, being fair. If Government should prefer a lighter rate, then 12 annas an acre, as the average of all the pargannas, would be sufficient; if something between these two rates are taken as a constant rate, I am satisfied that it will be deemed moderate, and the measure I wish to inaugurate will work with the greatest ease, and with something like real equality on all concerned. The accompanying memorandum will show how I prove this assertion to be entitled to acceptation.

19. The next point bears on the people's interests. You will perceive in the memorandum that I lay great stress on the absolute necessity of having a system of assessment that shall do away with all inequalities, and shall secure voluntary action on the part of zamindars to take water or not as they please. My reason for this is that Ami Chand, Extra Assistant Commissioner, who was lately employed in revision of Hissar settlement, has brought to my notice the mischief and ruin that took place in the estates watered by Western Jumna Canal by the North-Western Provinces system; out of 54 estates, 28, or more than half, suffered more or less from that system; 4 villages were sold outright; 8 were so impoverished that shares of the estates were sold; 6 were ruined from over-assessment, were put up to auction, and not till large reduction of revenue had been effected did the proprietors recover for several years after; while 10 others were heavily involved in debt that they nearly fell into the hands of strangers.

20. Full particulars are explained with the aid of a sketch map of the estate in Appendix 4, which has been made over to me by this officer himself, from a work he published on the Hissar District. This vernacular work was examined by the Commissioner of the Division, who had even a translation made of it, so that there is full authority for the facts I here relate.

21. I know it may be said in reply that this misery may have been produced by land revenue being pitched altogether too high on the old principle of Government demand at two-thirds of net assets, but that under the lower proportion of one-half such events may not have occurred. I have made enquiries on this point. Ami Chand assures me that though this may have aggravated the evil, other causes were at work, arising out of the system of amalgamating unirrigated and canal assessment, which undoubtedly brought ruin to many of the estates.

He cites two in particular—

(1.) That the supply of water failed in some of the estates at the tail end of, or more remote in situation from, the canal.

(2.) That in ill-peopled estates, whenever tenants were drawn away to fields on lower rents, the proprietors were still saddled with the high jamas, payment of which was obligatory, lands were deserted, or hands to work them were not available.

It can easily be conceived that two such potent causes in poor tracts like Hissar, Chunian and Montgomery districts would at once tend to disturbance of profits and silent deterioration.

22. I say, then, with this picture of real misery before us which has happened, and the great financial loss that seems to impend, it is right that a question of such vast importance to the people, to the credit of the Government in its administrative capacity, to the advantage of the State in a financial aspect, and to the cause of irrigation in general, should receive the most serious consideration before final orders are passed.

23. As I promised in a demi-official communication to the Secretary to supply further facts and arguments, I request the favor of your placing these papers before His Honor the Lieutenant-Governor as soon as possible.

Memorandum by E. A. PRINSEP, *Esquire, Settlement Commissioner, on the acreage system of canal-water assessment, written with a view to remove objections and call further attention to an important question (discussed in his printed paper No. 40).*

SOME objections having been urged against the principle I have advocated for assessing all lands as unirrigated and then putting an additional rate over and above canal-water rate to be a constant rate and sufficient for the realization of enhanced revenue on lands improved by canal irrigation, and this principle of taxation to be enforced not only now when a settlement of the land revenue is being fixed, but for every year hereafter of the term of settlement, I have thought the matter to be one of so great urgency as to require discussion; and as the objections are strongly advanced in several quarters, it becomes all the more necessary to weigh them calmly, thoroughly, and outspokenly.

Each point urged then shall be considered separately, and my remarks will be placed in juxtaposition.

It is observed that my paper (No. 40) views the subject only *in one aspect*. In theory, the principle advocated is admitted to be correct, but there are serious objections to its application practically.

I.—There are three aspects in which the question must be viewed:—

(1.) In the interests of the people.

(2.) In the interests of Government in its administrative capacity.

(3.) In the interests of a *great question* affecting the good of the State, and bearing on the finances of the country.

It is maintained that the method of assessment proposed certainly provides for all three interests.

(1.) An average acreage rate, constant for a term of settlement, is a fixity in itself known to everybody.

It draws the line of taxation on capital labor and raw produce so moderately and evenly on all alike that none

are harassed. None who irrigate now are made to pay a fine hereafter, while those who irrigate hereafter escape scot-free for a term of years, which, however short in period, will still disturb equality of taxation.

It does better than this, for it leaves it optional both now and hereafter to take the water. The system proposed is a *voluntary one*. If you take the water, you must pay full price to Government as the merchant who by his capital has supplied it for open sale.

If you take the water, you must pay something extra to Government as the co-landlord entitled by law to a large share of the profits, but content to fix its demand on this margin of profit now and hereafter to a moderate limit. If you do not take water, you neither pay one nor the other.

Surely under such a system ample consideration is shown to interest No. 1.

(2.) Any system which has fixity, moderation, does away with short-term settlements, escapes all chance of readjustment and remission of land revenue, requires no new agency for collection, and no new enquiry for the whole term of a settlement, increases the income of the State from year to year, and thereby the resources of that State to improve the country must be admitted to be a strength to the administration. The second interest then may be allowed to be duly considered.

(3.) That system surely must be the best which protects the two former interests and still provides unceasing funds out of which irrigation can be developed and extended to any extent.

That system surely is desirable and politically expedient which ensures a steady, though moderate, increase of revenue from year to year as the country gets developed and the people voluntarily come forward and pay this increasing form of taxation, which can be turned to the best account in further improvement. Put aside that the Canal Department shall not be credited with this new source of income, that they must be satisfied with the *full* price of the water, still here is a source of income which can be obtained if fixed on a moderate and even low scale of rate in some places for the first few years of the life of a canal, without any pressure whatever, payment of which is volun-

tary, and which if paid may be accepted as a free-will offering by the State in support of its efforts to raise taxation to meet the two great wants of the country—(*a*) improved communications, and (*b*) works of irrigation.

Any system then that deprives the State of these ever-increasing revenues must surely be denounced as financially unsound and politically injurious, for it will throw back the improving power of a country we know not how many years.

Chiefly that it involves in fact an annual settlement to some extent.

II.—To an extent next to nominal. The additional rate being *constant*, fixed once and for all for each village for entire term of settlement, everybody knows it; application of such rate is easily done, as the canal area must be measured yearly anyhow for very many years, so the same operation does for both Canal Department and this yearly State income. There is no element of uncertainty or harassment to the people in this. There is no more an annual *settlement*, for the rate has been settled. There is an annual collection of fluctuating revenue, it is true. So there is in the measurement of river lands and the changes of jama caused thereby; so there is (as far as the people are concerned) in the village rating which varies in amount from year to year, though the principle of rating on shares, soils, wells, or even land, universally remains the same. Surely there can be no more of an *annual settlement* here than there is an annual collection of the Road and School Fund income, where the rate, *viz.*, the percentage, is *fixed* though the amounts of yearly collection vary.

The water rate taken by the Canal Department for the use of the water can never be raised above a certain height, *viz.*, the cost of irrigation from wells.

III.—But how many villages are there with *no* wells, where perhaps no wells can be made, or are not worth making, owing to the large prime outlay required? Then, too, we know (I annex a synopsis prepared by Mr. Brown, Executive Engineer of Kangra District, who has for years studied the comparative cost of labor and capital incurred in lifting and utilizing water) that the cost of irrigation from canal is from 20 to 30 times (he gives the cost at 36 times) cheaper than what can be secured from wells. If so, what is to prevent Canal Department, a company (and I lay stress on this, as it is permitted by the advocates of a system contrary to the one I am seeking to introduce), raising their rates to the *full price*,

and this they may urge in all propriety on the above consideration of comparative advantage to be properly satisfied when canal rates are fixed even 20 times higher than surrounding well irrigation. Has any one considered this aspect when they believe there is a safeguard against raising canal rates ?

I know it will immediately be replied, " but if the rate-payers find they cannot pay such high rates " they will simply not take water and have recourse to wells. If wells cannot be made, what then ? Even if some are driven to well irrigation, conceive the impoverishment that may arise with such as cannot afford to incur expenses of constructing new wells ; and if such have been taxed on enhanced jama at time of a settlement, which tax is obligatory to the end of settlement, how can such a one exercise this free-will that is supposed to be given when he finds he cannot afford to give up canal irrigation or he will be paying a fine over and above unirrigated rates ? His only safety then of the two things he cannot afford is to hold on as long as he can do so, though reduced to extremities : he can go on taking canal water at even high rates, until he is quite impoverished.

By the " amalgamation" plan he has no hope, no way of escape, while he complains inwardly of the Government who, because water was begun to be taken after settlement, allows his neighbour, who may be his own brother, to pay altogether less for the canal advantages (taking canal rates and increased revenue into consideration), while he is fast being reduced to beggary, not being able to escape from either liability.

By the new system now advocated *it is purely voluntary*. Let the canal rates be too high in the estimation of subscribers, and as *they have the option* they will cease to subscribe. Thus the law of supply and demand in this case will adjust itself. In the former there is a check on the operation of this economic law which must prove disastrous to both interests some day, *viz.*, the buyer who is bound to buy, and the seller who is not compelled to sell.

Then, too, we know that zamindars in practice have been found ready to pay anything for water in certain seasons if the supply is near and full. They will rather even risk impoverishment than make up by labor and foresight

in other ways. It was exactly this cause which had much to do with the complete break down and agricultural ruin that occurred in the villages on the Western Jumna Canal. I perceived several traces of it even in the Pathankot estates on the Bari Doab Canal previous to new settlement.

I maintain, then, that however plausible the objection is in practice, it is not attended to by the people themselves; it is not a sufficient guarantee against terrible impoverishment that may silently set in in any village, of the fact, cause, or extent of which we may know nothing till it is too late to apply a remedy.

IV.—Why, I ask, should different rates be *necessarily* imposed? Why need we tax capital and raw produce when our real object is to raise money in the simplest and safest way in order to shew that canals will pay? Money is forthcoming, and irrigation is a necessity in a country so often exposed to famine, that it must be encouraged.

The profit derived from water will depend upon the kind of crop; *therefore* there must be not only *one* but several acreage rates, and these must be levied, not as the water rate from the cultivators, but from the proprietors.

Again, we are inconsistent: wells are made with the capital of the people, canals by the State alone. Why need both be reduced to same principle of requiring half net assets or water-rent profits to be taken as the only thing proper for Government to demand? We can surely afford to be generous so long as 10 and 12 per cent. interest is obtained without failure. Anything beyond that can be demanded by the State acting in the interests of the many by a more moderate rate and system of taxation. Again, are not all assessments really made on *averages*? The *theory* may be one thing to take half net assets (of each kind of produce too would be required to drive this argument to its proper conclusion); but is this ever done in practice, *quoad* each proprietor, even in an ordinary unirrigated assessment? If it cannot be attained there, why should this be deemed an essential here?

Again, as the object of the State is to secure increased production and improved communications for the general good of the country, and this cannot be carried out till Government increases its income from some source, and is able to shew that outlay so incurred will bring in good returns from which further irrigation measures can be executed,

is not Government bound to adopt the simplest and safest plan by which money is not sacrificed, and can be raised under even a moderate average acreage rate ? If it is bound to do so, then surely it is easy enough for Government to rule in its own interests and in the interests of the greater number, that it will be satisfied with an average acreage rate and does not care to take the whole profit, or make vain efforts to do so by insisting on several rates, so long as a moderate yearly-increasing income is brought into the treasury for the purposes of upholding the cause of irrigation everywhere.

Though there may be a deviation from the strict principle of getting full profits upon each kind of crop, *other advantages* are abundantly secured—*e. g.* :—

(*a*). The rate is uniform and is easier applied.

(*b*). The average rate presses equally on all who have taken water before and who wait to take water after a settlement.

(*c*). Equal taxation is thus secured, and is cheerfully submitted to, because known to be light in its pressure and *fixed* for a given number of years.

(*d*). Taxation fixed on these principles does not press on capital, industry, or raw produce.

(*e*). Greater encouragement is thus given to watering only the better and most paying crops, and so the wealth of the community expands and has free play in further demands for water.

(*f*). And as better crops are more abundantly grown in watered lands, these lands are taxed, or can be taxed, in one sense, by higher series of rates taken by the Canal Department. So long as the agency in creating and selling the water is the same as the co-landlord of the country, the State will, I apprehend, be in no way a loser now, and must be the recipient of larger and more increasingly large receipts hereafter.

V.—This is easily obviated by making a rule that canal water will be sold to cultivators only through, and on the responsibility of, the proprietor. The rate paper then goes to the proprietor with two columns

The rate must be taken from the proprietors, and not the cultivators; so here is a complicated operation.

in it, one for his own payment, the other for what is due from his subordinate. Besides it is a question now being mooted whether Act X. of 1859 will not bar the right of a landlord to sue for enhancement of rent caused by outlay solely incurred by the cultivator. If he is to pay water rate to the Canal Department, and his rent cannot be enhanced, then what becomes of the argument about the necessity of reaching canal profits through the landlord's pockets? As he will pay for water put on land he cultivates, so will the cultivator. They fare the same and pocket like advantages: why then all this stress laid on the necessity of getting at landlord's entire profits? He must be treated just as a cultivator.

But supposing it is necessary to take this additional acreage rate from the proprietor, where is the difficulty, either as to rating or collection? Open out another column and treat him as if he was a cultivator. Instead of one amount now paid through him to the Canal Department, he will have to pay a second separately to the State. I can see no difficulty in this procedure.

When there is uncertainty in the supply of water, the same allowance should be made in fixing the assessment.

VI.—This is just what is done, and must be done. It is a strong argument to shew the preference of a system of average acreage rates. Instead of an amount now fixed once and for all as reduced area at the time of settlement for 20 years, the system requires a fixed rate to apply for some period, not only to the reduced area now found to be watered, but what shall hereafter be watered from year to year. Thereby full allowance is made by a moderate rate applicable to all alike, and obviates all the difficulties of uncertainty in supply of water and variation of seasons. If they are harassed by the one, or blessed with good seasons, it is in the option of every subscriber to take water for that year or not, just as he pleases.

If this allowance is made not by a rate, but on the amount fixed at settlement once for all, whether water is given, or cannot be given, only one-half the evil is obviated of that. A proprietor may silently be reduced to suffering. He may alter the mode of cropping to prevent exhaustion by allowing for fallows. He himself may happen to have no more land, or may have abundant land and few tenants.

Other causes may be at work. An estate next door may be taxed more lightly which admits of lower rents being demanded; or there may be neighbouring lands, waste or cultivated, to be had on cheaper terms. The unirrigated lands hard by may be offered on very low terms, and in good seasons, or a succession of good seasons of rain, such lands may yield much larger profits; or even his brother hard by may also have more land than he can manage, none of which is watered by canal; or, having some land so watered, it was brought under watering *after* the settlement.

For any of these cases I say there is a risk, and a great risk, that his tenants may be induced to leave him to take up any fields on considerably lower rents. Where is there any safety, then, to such a proprietor if deserted by, and unable to procure, tenants owing to the disparity of profits caused by this fiction of previously fixed assessment? It is just such cases that do happen, and must happen; that have happened in the Western Jumna villages, as I can prove by undoubted fact. The impoverishment that there led to the sale of estates even is attributed by one of our best native Revenue officials (who was connected with the revision of the settlement, and had, therefore, sure means for coming to a correct conclusion) to this chief cause of obligatory and partial assessments.

Indeed, it is a question (putting consideration of soils apart), when a village becomes fully cultivated and reaches that stage of development where the land is minutely divided, whether regard to rotation of crops does not become such an absolute necessity that if we were to take the history of 20 fields now cropped with different crops, they will not all have to pass, at some time or other, through the same system of rotation within fixed cycles of years. My experience satisfies me that this conclusion is indisputable; and if it is, then the argument for an average line of rating becomes too true, and must be admitted, or the assessment must have a tendency on the present (*i. e.*, one year) distribution of produce to become unfair in principle and unequal in pressure, not only through a series of years, but, it occurs to me, whenever assessment is based at the outset merely on the profits of different kinds of produce ascertained to

exist in the one year only that the settlement was made, I do not understand, then, how the allowance in fixing the assessment can in practice be really secured, except by very light rates; and if light rates are fixed, it would really be an argument for the average acreage system; for it would amount to this, or next to this, in practice.

When uncertainty or variations of seasons are very great, the profits from water had better be left out, and dry rates taken.

VII.—What for a period of 20 or even say 10 years settlement? Any settlement on such short term, or short of 10 years, must be admitted to be objectionable in every point of view.

For all this period does Government really mean to say it does not care for increasing revenue, when it can be shown (1) that it can be equally and moderately fixed; (2) that it can be voluntarily and easily paid?

If this substitute must be resorted to, *viz.*, to take no enhanced revenue, it would amount really to admitting that there is no escape, but to resort to the very principle I am contending for: evil being foreseen, dry rates are recommended, and the result is what? Why just the same. Canal advantages are uniformly rated *on a system of acreage* rates, only with this difference, that instead of two rates being taken by Government in its double capacity of water merchant and the co-landlord, Government is content to take it in the former capacity only by an increased canal-water rate. There is something inconsistent in this. Substitute a canal company for the Government as the water merchant, and how does the principle degrade itself to actual negation of all share in the profits.

But apart from this, why should there be any such evasion of a fiscal responsibility? Canals must be made to pay. How can they pay if there is this readiness to give up the enhanced revenue which adds to the fund out of which irrigation works must be made.

Has any one counted the cost of such a suggestion? Take the Bari Doab Canal for example.

The abandonment of the acreage system alone will lead to the surrender, I estimate, of half a crore of rupees within a period of 20 years, even fixing the constant rate at from

12 annas to one rupee an acre on double the present area watered. After 10 years there can be little doubt the area will be much more than double. If care is taken, and resources are husbanded, this may increase to treble the extent. But accepting the double standard, Government will be deliberately throwing away in these days of increasing financial pressure more than half a crore of rupees, which might be raised without a murmur from the people.

This result is obtained by fixing an additional rate as a constant rate on the two lakhs of acres at present watered from this canal; but supposing the suggestion thrown out in this objection were followed, *viz.*, to fix the assessment on dry rates, and take nothing for enhanced land revenue for 20 years, by which time the irrigation system will be matured, does any one know the financial meaning of this? It simply amounts *to the deliberate sacrifice of Rs.* 2,00,000 *yearly for the next, say, three years ;* 3 *lakhs after for another* 3 *years ;* 4 *lakhs* after 10th year, and so on. *The actual loss of income would not be less than some* 70 *or* 80 *lakhs of hard coin for the entire Province in the entire period of the settlement.*

And is this to be given up, which would supply funds for constructing perhaps another 100 miles of large canals, or some 5 smaller canals, capable of irrigating two to three lakhs of new area from year to year; protecting the food of the country against famines; increasing production; and reproducing the means of new income, which shall still further increase the good and wealth of India?

VIII.—I think not, for these simple reasons, which are to a certain extent recapitulation of what has been urged above—

It is better for the country and the Government in temporary settlements that such profits and profit from extension of irrigation during the term of a settlement should go to the people, than that they should be grasped by Government by means of annual inquiry.

(*a*).—Admit that the people get the profits, and so the wealth of the country expands; but is it not better for the country, and for Government, that *part* (I say part, for only a moderate rate is proposed to be taken, and if Government likes it can be even a very light rate: the principle is the same) should be placed in the hands of the State to be formed into a fund for the promotion of irrigation works all over the country; that more land may be improved and

protected against famines; that this calamity may be stayed which affects the general weal of communities? Should such occur, it becomes imperative on Government to raise new taxes in other ways. Witness what has occurred all over India in these days, chiefly owing to the Orissa famine. Indirectly, if not directly, then these individual proprietors to whom it is proposed to give *all the profits* would suffer, while if part of the profits are given up, the resources of the State are improved, and new taxes are avoided.

(*b*).—Equality of taxation is secured by the one plan, but not by the other. Is this not an essential good to everybody?

(*c*).—Average rate being imposed and constant for term of settlement, every one knows it. Is there not fixity in this?

(*d*).—Moderate rate being imposed (let it be even low to remove the impression of Government grasping at anything that has the slightest chance of being oppressive), but still being uniform, all can pay it equally alike. If any one thinks that Government is grasping in its double capacity, he has it in his power not to take the water, and in this way we have the best guarantee against inordinate encroachment of profits. There is a remedy here in every man's hand; while in North-Western Provinces' system the law of supply and demand must be disturbed *quoad* obligatory rate-payers. If there is obligation on their side, and no promise of remission or permission to withdraw on the Government side from what might prove an oppressive contract with individual subscribers, can it be said that such an arrangement, one-sided at its commencement, may not also be deemed grasping and severe by intended parties when the day of trouble should ever arise? Is it not better for country and for Government to have this matter of taking water on purely an optional basis?

(*e*).—Then, too, there is greater encouragement given to the production of better crops, because capital, industry, and raw produce are not taxed at higher rates. Under an average acreage rate all can be industrious without the State grasping at higher share of the profits, and even if

it wants to do so, it can do so by putting on something to the differential rates paid for crops to the Canal Department (which, as far as incidents of taxation go in the land revenue system of India, can be sufficiently absorbed again by Government working on that discretion); and with this advantage, that the limits of a just demand can never be exceeded from year to year, inasmuch as it is in the option of any one so unduly pressed to refuse to take water. Prices must read just themselves to the measure of the popular demand.

(*f*).—If it be urged that the annual enquiry is in itself bad and vexatious, my reply is that, looking to what we avoid, and what we undoubtedly gain, it is by far the lesser evil: even here the evil is exaggerated, for the rate being moderate or low, fixed for each village for the term of settlement, known to everybody, and admitted to be light, no one would complain.

This yearly amount would change, and no more. The area is obtained by a process that must continue for the elimination of the canal-water rate receipts. The application of additional rates on those areas amounts no more to an enquiry than village rating, river assessment, or the collection of road and school fund income amount to a process that can be described as an annual enquiry in the sense of harassment to the people.

If the extension of irrigation is rapid, and the profits certain or large, then this can be obviated by reducing the period of settlement.

IX.—Yes; but to what extent? Ten and even 5 years. This is throwing back the prosperity of the country at least 3 years in every 10. Short settlements are an unmitigated evil. In lieu of income of this kind, which is easily and safely obtainable by another process, without a murmur in the country, and with no difficulty in collection, we prefer to perpetuate short-term settlements, prevent the earlier and surer expansion of wealth, and sacrifice perhaps one part of the agricultural community at the expense of another. I allude to those who take the water before, and those who after, a settlement; those who can take water now or hereafter, while there may be many

whose lands are too high or too low, remote from water-courses, or are quite beyond their influence. These evils are not objected to in the wish to secure the least good to the least number.

I confess I cannot concur in this solution of the difficulty which perpetuates one series of evils, and puts off to a later day others even of a more aggravated nature, tending to prevent or retard all progress.

To meet the financial loss by the above objections, it is urged that even if it comes to the worst, what is to prevent Government raising the canal-water rates to obviate such possible loss.

X.—My arguments above show that this has been anticipated as another solution. Certainly canal-water rates can be raised, can be made to over-ride any *loss to Government*. There is doubtless every reason to believe that that interest will be well looked after over a series of years; but when it has been maintained we are not to look at the question in *one* aspect, but what is best for the country as well as *for Government*, a little reflection will show that this is no way of escape. On the contrary, greater inequalities of yearly taxation will arise. The proprietors whose enhanced jama was included in the settlement under North-Western Provinces' system will be utterly depressed, while the increased water rate will take the form of a demand for a higher price from those who began to take water after the settlement. To prop up a financial loss, is this a just way of distributing the burden of taxation? I consider great danger likely to arise out of a system which allows Canal Department to raise its rates without reference to a law that regulates supply and demand; and as regards the former class of involuntary subscribers, the consequence I foresee must some day or other prove disastrous.

Conclusion.

But are these sufficient reasons for refusing to accept a method of assessment which promises to increase the income of the State without pressing on the real interests of the people?

Are we really going deliberately to sacrifice what in these parts will amount to a loss of more than half a crore of

rupees within the term of 20 years, and may amount to 70 and 80 lakhs; and if the opportunity is overlooked in North-Western Provinces and in other parts of India where settlements may be going on, may still further amount to one and two millions of money?

Is there no one ready to warn the Government, and prevent so serious a financial calamity?

APPENDIX No. 2.

Pargannawar abstract of areas in 1865, *watered by Bari Doab Canal, for 7 years, in Amritsar and Gurdaspur districts.*

Parganna.	Area watered, 1865.	Total cultivated area of same village.	Percentage of area irrigated on cultivated area.	Revenue rate jama deduced from produce for irrigated standard only.	Additional acreage rate deduced.
				Rs.	Rs. A. P
Pathankot ...	9,800	30,224	32	8,454	0 13 9
Gurdaspur ...	23,298	70,090	33	24,524	1 0 9
Total ...	33,098	100,314	33	32,978	1 0 0
Batala ...	32,195	82,965	39	35,666	1 1 4
Amritsar ...	34,541	83,537	41	24,459	0 10 6
Ajnala ...	31,129	69,853	45	19,375	0 9 7
Tarn Taran ...	22,754	75,128	30	16,671	0 11 8
Total ...	120,619	311,483	39	96,171	0 12 8
Grand Total ...	153,717	411,797	37	1,92,149	0 13 9

APPENDIX No. 3.

Synopsis of calculations regarding canal-water revenue by—

(1). Proposed plan ;

(2). North-Western Provinces plan ;

on area watered and likely to be watered by Bari Doab Canal.

N. B.—Area watered in Amritsar Division in past years stands thus :—

1859.	1860.	1861.	1862.	1863.	1864.	1865.
25,518	45,276	78,462	97,352	100,568	95,598	153,717
	Quadrupled in first 5 years.		*Doubled in 5 last years.*			

Future years.	Area irrigated.	Gross ordinary canal receipts.	Deduct working expenses.	Net return.	Additional acreage return as enhanced revenue.	Total.
1865	2 lakhs (including Lahore.)	5 lakhs.	4 lakhs @ 80 per cent. on income.	1 lakh.	2 lakhs × 3 years = 6,00,000	3 lakhs rupees.
1866						
Years 3 1867						
1868						
1869	3 lakhs.	8 lakhs.	5 lakhs @ 67 per cent. on income.	3 lakhs.	3 lakhs × 3 years = 9,00,000	6 lakhs rupees.
Years 6 1870						
1871						
1872	4 lakhs.	11 lakhs.	6 lakhs @ 66 per cent. on income.	5 lakhs.	4 lakhs × 4 years = 16,00,000	9 lakhs rupees.
1873						
Years 10 1874						
1875						
1876	6 lakhs.	15 lakhs.	7 lakhs @ 50 per cent. on income.	8 lakhs.	6 lakhs × 5 years = 30,00,000	14 lakhs rupees.
1877						
Years 15 1878						
1879						
1880						
1881	7 lakhs.	18 lakhs.	8 lakhs @ 46 per cent. on income.	10 lakhs.	7 lakhs × 5 years = 35,00,000	17 lakhs rupees, income from 16th year. Probable income at 20th year will be 20 lakhs.
1882						
Years 20 1883						
1884						

REMARKS.—The entries opposite 1865 are taken from Canal Report as actual for that year.

Rates of increase in area and receipts is made out by comparing increase effected within last 5 years.

The additional acreage rate is assumed to be one rupee over and above unirrigated, fixed now and for term of settlement.

Additional total revenue 20 years. } 96 lakhs.

Deduct initial years 1867 = 2 lakhs. } 40 lakhs.

Multiply | 20 years.

Estimated revenue that would accrue within 20 years. } 6 lakhs.

Conclusion drawn.—If North-Western Provinces' plan is adopted, we get 2 lakhs; the initial for each year of 20 years = 40 lakhs. If proposed plan is adopted, then increase will come in yearly, which will amount to 96 lakhs altogether in 20 years.

Thus, within 20 *years* an increasing income will be obtained, amounting in all, at 20th year, to 56 lakhs.

If, then, the acreage plan is not adopted, *and nothing is charged during currency of settlement till a new settlement occurs* 20 *years hence, Government becomes a loser of more than* HALF A CRORE OF RUPEES!

Copy of a letter No. 866, *dated* 12*th May* 1868, *from Secretary to Government, Punjab, to Secretary to Financial Commissioner, Punjab.*

IN returning the original enclosures of your docket No. 143, dated 14th March. 1868, regarding the assessment of villages irrigated from canals, I am desired to state that a water rate which is sufficient or even excessive in one locality, may be quite insufficient in another; and as varying *abiana* rates are not approved, the Lieutenant-Governor sees no alternative but the adoption of a principle such as Mr. Prinsep advocates.

2. The Lieutenant-Governor accordingly entirely approves of that officer's proposals, and authorizes their being carried out, and relies on Mr. Prinsep fixing the amount at such rate as can be borne without difficulty; but it is to be understood that this extra rate is to be levied only in the event of water being supplied from the canal, and that the amount is to be credited to land revenue, which appears to be the desire of the Viceroy.

Extract from docket No. 2861, *dated* 6*th June* 1868, *from Secretary to Financial Commissioner, Punjab, to the Settlement Commissioner, Punjab.*

WITH reference to his No. 409, dated 25th July last, forwards, for his information, copy of Government No. 366,

dated 12th ultimo (received 1st June), conveying orders as to the mode to be adopted in assessing villages for the advantages derived from canal irrigation. Any remarks that may be found necessary on these orders will be conveyed in a separate communication.

Extract from a letter No. 227, dated 16th July 1868, from Settlement Commissioner, Punjab, to the Secretray to Financial Commissioner, Punjab.

In acknowledging receipt of your No. 2861, dated 6th ultimo, I wish to enquire intermediately, and request instructions as early as possible, whether I am to understand from the observation in the letter of Secretary to Punjab Government,—which is an enclosure to the same, to the effect "that varying *abiana* rates are not approved,"—it is intended that I must confine myself to one invariable rate for every village from Pathankot downwards to Lahore and Chunián.

2. I had contemplated fixing three rates—

One rupee an acre for the circles of Pathankot, Gurdaspur and Batala pargannas;

Fourteen annas for Amritsar and Ajnala;

Twelve annas for Tarn Taran, Lahore, Kasur and Chunian;

allowing myself to deviate from this rule in certain assessment circles and villages where there were strong and special reasons for doing so.

* * * * * *

4. The next point I am anxious about is whether it would not be better for some Canal Officer to be deputed to attend with me at the meetings held to take these additional engagements.

* * * * * *

7. I think then it is of the highest importance that a *Canal Settlement* should now be made once and for all, for every village, by this Canal Officer uniting with me, and authorized to make his arrangements and announce them at the same time to the people.

* * * * *

8. I wish to know whether there is any chance of these proposals having weight with His Honor the Lieutenant-Governor, and, if so, whether I need wait in announcing these new water rates on the land-revenue side of the account.

Extract of a letter No. 469A., dated 28th August 1868, from the Secretary to Financial Commissioner, Punjab, to Secretary to Government, Punjab.

WITH reference to your letter No. 366, of 12th May, I am directed to submit, for orders, the enclosed letter from Mr. Prinsep, No. 227, of 16th July, and to convey the remarks of the Officiating Financial Commissioner as follows:—

2. With reference to paragraphs 4 to 11 of this letter, the Officiating Financial Commissioner presumes that Mr. Prinsep wishes a canal settlement of the nature suggested in Colonel Strachey's memo. circulated with Government of India letter No. 143I., dated 13th September 1867, by which the area in each estate which is to have canal water shall be determined, so that the people may know now what amount of canal water they are to have for use, and the rate at which they are to be assessed for it, and may make their own arrangements for the extension of irrigation by wells if they wish to do so.

3. Mr. Egerton gathers from Major Gulliver—

(1.) That until the project for enlarging the Bari Doab Canal is drawn out, and the subordinate channels fixed, it is not possible for the Canal Department to say what lands can come under irrigation;

(2.) That the effective irrigation which can be performed by a given amount of water is not yet determined, and that, therefore, it is impossible at present to settle the area of each estate for which water will be allowed.

And that for the above reasons it is not possible at present to make the canal settlement which Mr. Prinsep suggests.

4. It is no doubt desirable that the people should know now at once for the term of settlement what amount of canal water they may expect to have, and at what cost; but, under the circumstances, Mr. Egerton does not see how this information can be given them; and the water-advantages assessment must be made without waiting for the Canal Department to make a settlement of each estate on the principle of allotting a certain amount of water to each estate.

Extract of letter No. 680, *dated 5th September* 1868, *from Secretary to Government, Punjab, to Secretary to Financial Commissioner, Punjab.*

In acknowledging the receipt of your letter No. 496A., dated 28th ultimo, I am desired to state that, when using the term "*abiana*," the Lieutenant-Governor referred only to the water rates fixed by the Canal Department, which the Supreme Government and Secretary of State desire to be uniform on the lands irrigated by any one canal.

2. The differences of advantage derived from water by different villages according to their varying circumstances must, His Honor observes, be determined by the Settlement Officer when fixing the additional jama to be assessed on account of water privileges; and this should accordingly be graduated in accordance with these varying circumstances, as proposed by the Settlement Commissioner.

3. In determining the amount of this extra demand, the Settlement Officer should no doubt communicate freely with the officers of the Canal Department, and it will probably be advantageous if one of the latter can be present when the jamas are given out, as suggested by Mr. Prinsep.

4. It will not, however, be in the power of any Canal Officer, as correctly remarked by the Financial Commissioner, to give an assurance that the *abiana* rate shall not hereafter be raised by the order of Government.

5. There appears no valid reason for the present to apprehend that such increase will be made as to necessitate an alteration in the amount of additional jama assessed on account of extra benefit derived from the use of canal water; but should such prove to be the case, the latter must of course be lowered simultaneously with the enhancement of the *ąbiana* rates. Whatever may occur hereafter, however, it is necessary that when the Settlement Officer announces his settlement the zamindars be made aware that Government has the power of raising the rates if they think fit, which they are not likely to do in a manner calculated to cause injustice or hardship to those irrigating from the canal; or if the rates be raised to such extent as to necessitate a reduction of the extra assessment, this reduction will be introduced at the same time.

EXTRACT No. II.

PROCEEDINGS OF THE HON'BLE THE LIEUTENANT-GOVERNOR OF THE PUNJAB, IN THE DEPARTMENT OF AGRICULTURE, REVENUE AND COMMERCE,—No. 107, DATED 22ND JANUARY 1873.

[As the arid tracts forming the divisions of Mooltan and the Derajat came under settlement, and the question of low-lying river lands from the Sutlej and Ravi in the east to the Indus in the west had to be considered, the subject of fluctuating assessments came prominently before the notice of the Punjab Government, and in the Review of the Revenue Report for the year 1871-72 the following remarks were recorded by the Lieutenant-Governor.—H. C. F.]

* * * * * *

61. The Lieutenant-Governor is further disposed to believe that in some districts of the Punjab the rigidity of the Government demand may force the people into debt, the revenue officials, especially the Deputy Commissioner and the tahsildar, being so burthened with judicial work at the present time as to prevent them becoming intimately acquainted with the circumstances of individual villages, and thus making application for remission where this may be really necessary. The system of a fixed demand, introduced from a Province where the rain-fall was fairly abundant, presses sometimes hardly on Punjab tracts like Montgomery, Muktsar or Marwat, where in a cycle of ten years two may produce excellent crops, five seasons may be moderate, and three may utterly fail. In tracts so situated, timely remission of the demand can alone save the proprietors from debt. It might be practicable, His Honor believes, to fix for such exceptionally-situated districts a lump assessment calculated on the average outcome of a series of years, and allow the District Officer, in a bumper season, to realize double, or even more, the average demand, collecting half, or nothing at all, in a year when the harvest was bad or had altogether failed. It is probable that such a system, if carefully watched by officers with leisure to make themselves fully acquainted with their districts, would result in no loss to the Government; while the increased collections in plentiful years would not be felt by the people. Now, the remission is often

proposed when it is too late to save the village, the lands of which have been mortgaged before the Government can render assistance.

62. Some such expedient might be tried for *sailaba* lands (those flooded by the rivers, or directly affected by percolation from them). In his march, this cold season, the Lieutenant-Governor has heard many complaints of great loss experienced in the Lahore and Montgomery districts from the change in the course of the river, old channels having silted up and *sailaba* lands, formerly abundantly fertile, having become altogether waste. Here an average rate might, His Honor believes, be with advantage fixed for term of settlement, with annual measurement of the cultivated area. Parts of the Derajat which His Honor has this year visited are in the same position, the only cultivation possible being from hill torrents which sometimes fail and often change their course, a village one year obtaining a full supply and the next only half its area receiving water.

EXTRACT No. III.

FLUCTUATING ASSESSMENTS OF CANAL-IRRIGATED TRACTS, MONTGOMERY.

[The first case of fluctuating assessments which was actually referred for the order and sanction of Government was also connected, as in the instance of the Bari Doab Canal, with canal irrigation. For the canal-irrigated tracts of the Dipalpur and Pakpattan tahsils, a special system was proposed and sanctioned. The exact details will be seen from the following extracts taken from the correspondence in which the question was referred to the Punjab Government and the Government of India, and received formal approval.—H. C. F.]

Copy of a letter No. 1176, *dated 2nd December* 1872, *from* J. A. E. MILLER, *Esquire, Secretary to Financial Commissioner, Punjab, to the Officiating Secretary to Government, Punjab.*

SUBMITS, for the orders of Government, a copy of a memorandum by the Financial Commissioner on the system to be followed in assessing the villages in the Dipalpur Tahsil of the Montgomery District irrigated by the Khanwah and Sohag Inundation Canals, together with correspondence therein quoted, as per list attached.

Extract from a memorandum by R. E. EGERTON, *Esquire, Financial Commissioner, Punjab, on the mode of assessing the villages of the Dipalpur Tahsil irrigated from the Khanwah and Sohag Inundation Canals.*

THE Chief Engineer of Irrigation Works, Punjab, forwarded with his letter No. 1327 I., dated 5th April 1871, a report by Mr. E. C. Palmer, Superintending Engineer of the Lower Bari Doab districts, on the water rates to be levied on the Inundation Canals in the Lahore and Montgomery districts. The Chief Engineer subsequently forwarded with his letter No. 763 I., dated 17th February 1872, memoranda by Mr. Palmer on the financial state of the Upper and Lower Sutlej Canals.

2. This report was circulated for opinion to the Settlement Commissioner, Mr. Prinsep, to the Commissioners of Lahore and Mooltan divisions, to the Deputy Commissioners

of Lahore and Montgomery, and to the Settlement Officer, Montgomery. Mr. Blyth, formerly Deputy Commissioner of Montgomery, was consulted, as he had long experience in the Montgomery District, and had very recently left it. The memoranda on the financial state of canals were not circulated. These papers are styled respectively Mr. Palmer's report and Mr. Palmer's memoranda in this note.

3. The opinions of these officers have been recorded, and, as the subject is so intimately connected with the assessment of part of the Montgomery District that the people refused to take up any assessment until they knew what the water rate was to be, it is evidently necessary that the water rates to be adopted should be fixed, and the manner of levying them established before the assessments of land revenue are given out.

4. The canals to which Mr. Palmer's report refers are—

1. The Ghara or Khanwah.
2. The Upper and Lower Sohag.
3. The Katora.

The irrigation of the first two is confined almost entirely to the Montgomery District, and that of the third is, for the present, in Lahore only.

I am considering for the present the rates for the first two only, as the irrigation from the Katora is very little developed; the country through which it runs is different, and a rate has been temporarily fixed which differs from that in use on the Khanwah and Sohag.

5. Mr. Palmer, in paras. 7-11 of his report, describes the system now in use for assessing revenue on account of irrigation from the Khanwah and Sohag Canals; and this system is further explained in another memo. by Mr. Palmer dated 22nd December 1871. The fixed items of income are:—

(1.) Fixed abiana Rs. 25,110,* assessed in a round sum at the first settlement.

* *See* Settlement Report, Gugera; for Hujrah (Dipalpur) and Pakpattan tahsils this sum was increased, by the addition of 20 per cent. of the fixed land revenue to Rs. 37,083 (*See* para. 8 of Mr. Cust's Review of the Settlement Report.)

(2.) A proportion of the land revenue, amounting to Rs. 27,912,* fixed at settlement as the share of land revenue due to canals.

* *See* Superintending Engineer's memoranda on financial state of Upper and Lower Sutlej Canals, para 2.

The latter appears to be merely a statistical item, and is not really credited in the canal accounts.

The fluctuating item is—

A rate of 8 annas per acre on all lands not included in villages assessed with fixed abiana which have been brought under cultivation since the settlement.

6. The memorandum shows that the Upper Sutlej Canals are worked at an annual loss, due to the low amount of the fixed abiana, and the low rate of charge for water generally. Mr. Palmer proposes new differential crop rates for water, rising to a maximum in four years for kharif crops, and a general rate of 12 annas for watering given for rabi sowings. The last rate will not increase progressively like the others.

7. In paras. 38 to 45 of his report, Mr. Palmer discusses the question of a water-advantage rate, or, as it is called in the Canal Act, an owners' rate. He recommends that no separate rate of this kind should be levied ; but he recommends that, in the case of waste land sold by Government, the proceeds of the sale shall be credited to canals if the land is irrigable from a canal, as the selling price has no doubt been enhanced by facilities for such irrigation. As the sale of waste lands has been almost prohibited, there is not much use in discussing the opinion given by Mr. Palmer. I may mention that I think his arguments are incorrect. The owners' rate is part of the extra profits of each crop. The enhanced price paid for the land and the capital sunk in improving land are both amply remunerated by the enhanced value of that portion of the increased profit which the proprietor receives from canal irrigation without Government foregoing the owners' rate.

8. I gather from para. 42 of Mr. Palmer's report that he considers the whole of the land revenue assessed in the canal tracts on land irrigated from the canal should be credit-

ed to canals; and, if he means this, of course he is right in thinking there is no need to impose an owners' rate.

9. Mr. Palmer's proposed rates at the full amount will produce about Rs. 1,37,208 on an area of—

	Acres.
Kharif	81,000
Rabi	33,000

The highest income heretofore realized is Rs. 89,046 in an exceptional year.

The opinions of the officers consulted are briefly abstracted here:—

Mr. Prinsep—Considered the rates fair if no separate owners' rate was charged; if a separate owners' rate is charged, he thinks the rate should be reduced.

Commr. Mooltan, Colonel Graham,—Approves of the rates, and would assess an owners' rate.

Mr. Roe, Settlement Officer,—Considers the rates high, but not too high if the land revenue is assessed lightly.

Mr. Purser, Settlement Officer,—At first proposed reduced rates of abiana, on the ground that the land-revenue assessment was to be raised. He has since then made another proposal, and approves of the rates proposed.

Mr. Blyth, Deputy Commissioner,—Approves of the rates proposed, but would not make them progressive. He would fix them for four years, and then revise them (I think from this he appoves of the *lowest* rates proposed by Mr. Palmer). Approves of the proposal to omit water-advantage or owners' rate.

Mr. Tolbort, Offg. Deputy Commissioner,—Makes a proposal to regulate the payments for water by facility of irrigation and fertility of soil, which appears impracticable. If his plan is not approved, he accepts Mr. Palmer's rates.

10. The Chief Engineer, in forwarding Mr. Palmer's report, deferred making any lengthened comments on them. He considered the rates very moderate indeed, and proposes they should be tentative only until the new plan of making rajbahas, which will save the irrigators much of the labor and expense now bestowed in making and clearing long water-courses. It will be seen from Mr. Palmer's report, and from the account of the mode in which payments for water are made, and have been compounded, how very intimately question is connected with the assessment of the land the revenue.

11. This was recognized at the first settlement, and much of the payment for water was then commuted into a fixed payment from each village. The people recognized the connection at the present settlement, and refused to take up any assessment of land revenue until they heard what their water rates were to be.

The whole question of land revenue and water rates, therefore, came under consideration together, and has been discussed with me by the Settlement Commissioner, Mr. Prinsep, the Officiating Settlement Commissioner, Mr. Lyall, and the Settlement Officer, Mr. Purser.

12. I stated in a former letter, No. 5211, dated 17th August 1871, to Settlement Commissioner, that I considered crop rates unsuited to a district where agriculture is so backward as it is in the lands watered by the canals of the Upper Sutlej series. I then considered the differential rate on crops had a tendency to induce the people to grow the less valuable crops for which a lower water rate is charged; on further consideration, and after speaking to the zamindars of the Dipalpur tract, I have seen reason to withdraw the opinion on differential rates I formerly expressed. I do not think the effect I anticipated will be produced at Dipalpur.

Mr. Prinsep's letter No. 21, dated 21st June 1871, announced that he had postponed announcing the assessments in the canal-irrigated circles of Dipalpur because the people refused to take up any engagement for land revenue until they were informed what the water rates were to be. Mr. Prinsep went into some calculations to show that if Mr. Palmer's water rates were adopted the existing assess-

ments of land revenue would have to be lowered,—a result which he did not approve.

Mr. Prinsep asked that the water rate and the owners' rate should be merged into one rate. He also asked that the proposed water rate should be reduced, or that half of it should be credited to land revenue.

This letter appears to raise the whole question of what portion of the revenue is due to irrigation in a tract like Dipalpur, where the rain-fall is scanty and barani cultivation is almost unknown; such as there is exists in natural depressions of the ground, and the rain-fall on other higher ground near it is led on to the low land to irrigate the crop.

13. Mr. Lyall, the Settlement Commissioner, and Mr. Purser, the Settlement Officer, in reply to a reference made by me in reply to Mr. Prinsep's letter above quoted, have made proposals for the assessment of the canal-irrigated circles which appear to me to solve the question fairly,—in such a way that the largest revenue shall be realized with the least risk to the people.

The proposal is set forth in Mr. Lyall's letter No. 439½C., dated 10th February 1872, to the Settlement Officer of Montgomery, and in No. 150, dated 12th idem, to the Financial Commissioner.

14. The proposal is briefly this:—

I.—To assess a fixed land revenue, a low barani rate and a rate on wells, which will produce the revenue which might be taken from the village if there were no canal irrigation at all.

II.—To fix rates composed of the estimated value of ⅛th of the gross produce plus the differential crop rate proposed by Mr. Palmer for 1874-75 (that is his full rate), and to treat this as fluctuatnig revenue payable per acre for crops watered by the canal if the crops ripen.

Mr. Purser, in his letter No. 79, dated 30th March 1872, reports how he has carried out the above proposal. He has not taken the full value of ⅛th of the produce however, and his rates are therefore somewhat lower for nearly all the crops.

He states, however, in paras. 5 and 6 of this letter, the reasons why he has done so.

The rates he proposes to adopt give a very large increase to the assessment if the canal water-supply is kept up and the crops ripen; but if the supply of water fails the remission will be very large. I have spoken to the zamindars of the canal tract in Dipalpur and to Baba Khem Singh Bedi, who holds a jagir and is a proprietor of land in the tract affected by these proposals, and they accepted the principle readily.

15. It is impossible under any system to dispense with measurements of the land irrigated from the canal; and, if these measurements are indispensable and are sufficiently accurate for assessment of water rates, there is no reason why they should not be accepted for a portion of the land revenue also. In no other way can the land-revenue demand be made elastic enough to give the Government a fair revenue from the land when crops are produced, and at the same time to avoid exacting revenue from the people when they have suffered from drought and failure of irrigation and have reaped no crops.

16. If the proposed system is accepted, there are several subsidiary points to be settled:—

1. The amount of the rates for each crop.
2. The system by which the assessments of the fluctuating revenue shall be made and announced annually.
3. The period for which the rates now fixed shall remain unaltered.
4. The proportions in which the fluctuating assessment shall be credited to land revenue and to canals.
5. The amount of assessment upon which local cesses and rates shall be levied.
6. The proportion of fluctuating revenue which shall be allowed to jagirdars.

17. In regard to the amount of the rates Mr. Purser's proposals are contained in his report to the Settlement Com-

missioner, No. 79, dated 30th March 1872, which the Settlement Commissioner proposes to modify by raising the rate on sugarcane to Rs. 1-12; by reducing the rate on rice to Rs. 2-12, and on cotton to Rs. 1-12; by reducing the rates on crops Class IV. (*a*) to Rs. 1-6, and those on the first four crops of Class IV. (*b*) to Re. 1.

18. I cannot concur in the proposed reductions. The rates proposed by Mr. Purser are very low, if Mr. Palmer's full water rates are considered fair. They are very little in excess of the actual water rate proposed, and I see no reason for reducing them. I concur in the proposed increase in the rate on sugarcane.

19. Mr. Lyall also proposes a change in the manner of obtaining the fixed assessment due to barani. His plan differs little from that which Mr. Purser has used in his calculations, and, as the amount of difference is small and relates merely to the theoretical part of the business of assessment and may be modified in announcing the fixed assessment of each village, I think Mr. Lyall's plan, as stated in paras. 3 and 4, may be adopted.

20. Mr. Purser's rates for fluctuating revenue are extremely low. He states, however, that the assessment will be greatly raised by using them, and that he anticipates difficulty in inducing the people to accept them. He has informed the people of the rates he proposes, and, on my questioning the zaildars, they appeared to approve of the system, and did not complain of the amount of the rates. I therefore recommend that the rates proposed by Mr. Purser for fluctuating revenue, with the enhanced rate on sugarcane proposed by Mr. Lyall, be sanctioned.

21. With reference to the second question, *viz.*, the system of making and announcing the annual assessments. I consider that as so large an amount of revenue will depend on the measurements of irrigation, the Canal Officer shall take care that the lambardars and patwaris are present at the measurements, and when the measurements are finished he shall call the lambardars and patwaris together at convenient places and shall announce the revenue assessed on them at the rates sanctioned. The Canal Officer shall cause the

men who have made the measurements to attend when he announces the assessments, and shall invite persons who object to the measurements to attend and make their objections. This shall be done before the assessment lists are sent to the Deputy Commissioner for collection of the revenue. I much wish that the services of the village patwaris could be utilized by the Canal Department in making these measurements. The Chief Engineer is much opposed to their being so employed, but I conceive one of the chief uses of training a set of competent patwaris is to make them competent to perform duties of this kind; and I do not think they are likely to measure any worse than the under-paid amins who are temporarily employed by the Canal Deparment, and who are not employed in the same villages for two years running. The patwaris could measure up the areas quicker than the amins, for they are more numerous. They would always be present to answer for mistakes, and they are for this reason far more under control than the amins can possibly be. The Canal Officer should announce the assessments in any case.

22. In regard to the period for which these rates should be maintained unchanged, I think that one period must be fixed for both land and water rates. It would never do to make one part of the rate alterable at pleasure in the Irrigation Department, and to make the other portion fixed for a term. The plan is an experiment. I think the rates proposed are low, because they are levied only on crops which have ripened, and much of the ordinary risk attending assessments of land revenue are removed. I think, therefore, the period for which the rates are announced should be a short one, and I would fix five years as the term.

Extract of a letter No. 439½*C., dated* 10*th February* 1872, *from* J. B. LYALL, *Esquire, Officiating Settlement Commissioner, Punjab, to the Settlement Officer, Montgomery.*

* * * * *

5. The system of assessment I propose will be best explained by applying it to an imaginary village. Take one

with a total area of 500 acres, with 300 acres of cultivation, and six wells. Proceed as follows :—

1*st*.—To get a "barani" rate on cultivation, calculate what sum the whole area might be leased for as rakh land, with the chance of some rain crops in exceptionally rainy seasons, and divide such sum on the cultivated area. In this country a true barani rate will always be exceedingly low. I put this sum at a guess at Rs. 56, which gives a barani rate on cultivation of 3 annas per acre.

2*ndly*.—Assess the wells at the average rates now used by you in assessing wells in adjacent villages not irrigated by the canal. [By rates I mean not only well abiana, but barani rate on average well area.] I put this rate at a guess at Rs. 30 per well, which gives Rs. 180 on 6 wells; but Rs. 23 have to be deducted on account of barani rate separately assessed. [3 acres × 120, at 20 acres average area irrigable by a well.]

3*rdly*.—Take each crop or class of crop for which differential water rates are proposed in para. 47 of Mr. Palmer's memorandum dated 9th December 1870, and calculate the values of one-ninth shares of such crops on one acre irrigated by canal; these values, less 3 annas per acre barani rate separately assessed, will be standard differential water-advantage rates. To them add Mr. Palmer's proposed water rates, and we have standard lump sum water and water-advantage rates. But it may safely be predicted that these standard lump sum rates so worked out will be found much too high. One reason to my mind is that, though Mr. Palmer calls his rates water rates, they really include water-advantage rate. He argues that the latter should not be taken on lands irrigated by these canals, because the zamindars have to spend about 12 annas per acre per annum in canal repairs, the whole or greater part of which work is taken off their hands on perennial canals. But this is, it seems to me, more correctly an argument against taking a

full water rate. Mr. Palmer's water rates will therefore have to be reduced, and I think that you will be able to show that, to preserve anything like balance between water rate and water-advantage rate, the Government will also have to go below the standard of one-ninth gross produce approved by the Financial Commissioner for assessment of the land revenue. In other words, I expect that if the value of one-ninth of the gross produce for each crop, less a true barani rate, is deducted from the highest practicable lump sum rates, it will leave but a small proportion of them to be credited in account as water rate. The State will in fact have to encourage the canal by lowering its standard of share on the land-revenue side. You will have to use your judgment in fixing the actual lump sum rates you propose should be taken. Your calculations of the net assets of the proprietor collecting from a tenant by batai (that is of the value of his share of the grain for each crop on one acre less all expenses), which I believe you have made out already, will assist you, and many natives could give an idea, useful as a standard, of the highest rate which could be taken without breaking down the villages. Having fixed your differential lump sum rates in this way, then settle what proportions of them should be treated in account as water and water-advantage rate respectively; you must take a proportion and not a fixed rate as water-advantage, as a uniform rate would have to be a low one, which would be unfair to jagirdars; and the proportion must be uniform, or there would be confusion of account. I expect that you will have to credit to water-advantage revenue two-thirds of the lump sum rates.

To return to the imaginary village. I put at a guess the average incidence of these differential lump sum rates at Rs. 2 per acre. The village being assessed as described above with a barani rate, a well abiana rate, and differen-

tial lump sum canal rates, the following collections might be expected for one year:

	Rs.
Fixed assessment.—Barani jama	56
Well abiana	167
Total	223
Fluctuating assessment.—Lump sum canal rate ...	390
Grand Total	613

Of the grand total, Rs. 130 would be canal-water rate and Rs. 483 land revenue.

6. I have calculated the canal rate income on the supposition that the wells would water 20 acres a-piece, or 120 acres, leaving 180 acres to the canal; but I am aware that in point of fact this is a delusive estimate. For the kharif the wells are chiefly used, I believe, to supplement the canal; some rice land is, with the help of canal water, sown again with gram, and this is about the only land off which a double harvest is got. Of the land reserved for the rabi the greater part is, I believe, irrigated by wells only; or if the canal can give one watering before it dries up, it is the most it can do, and after that the wells come into play. There are very few villages in which there is any canal chak, that is any plot of cultivation which is irrigated solely by the canals without help from wells. Of course in some seasons the wells may not be wanted at all in the kharif, but this is the exception; they are generally wanted for some of the kharif crops if not for all, either early or late in the season, either to start or save the crop. In the rabi they are always wanted.

7. There will be no well area as distinguished from canal area. The zamindars can, of course, if they like, irrigate some fields solely from their wells, and on these no canal rate will be collected. But wherever canal water is used, whether in conjunction with well water or not, the canal rate will be collected, unless the crop dries up owing to lack of water in the canal, when no collection will be made, or unless from the same cause the crop is very poor, when

the Canal Officer will, as on other canals, be able to lower his demand. Mr. Bailie seemed to think there would not be much difficulty in regulating collections by these conditions.

Extract of a letter No. 6, dated Camp Bannu, 16th April 1872, from J. B. LYALL, *Esquire, Officiating Settlement Commissioner, Punjab, to the Officiating Secretary to Financial Commissioner, Punjab.*

IN continuation of my No. 150, dated 12th February last, I have the honor to forward herewith a copy of a letter from Mr. Purser, Settlement Officer, Montgomery, No. 79, dated 30th ultimo, reporting for preliminary sanction the revenue rates he proposes to use in assessing the canal-irrigated chaklas of tahsils Dipalpur and Pakpattan.

2. Mr. Purser's report is so clear and exhaustive that it leaves me little to say. I have, however, added some expressions of concurrence and explanation in the form of marginal notes to his letter. The only suggestions which I have to make are as follows.

3. With regard to the banjar or barani rate, the plan I proposed has not been carried out in its entirety. My idea was to assess the rate on total area ("exclusive of minhai"), as has been done; but I did not propose, as Mr. Purser has understood, to give a reduction again to the amount rateable on the cultivated area. On the contrary, my idea was that the full sum of this rate on total malguzari area would form a part of the jama of fixed land-revenue proper. On the other hand, I proposed that in calculating the well-abiana and canal lump sum rates an allowance should be made for the barani rate separately assessed. I intended also that this banjar rate should be put high enough to cover the barani cultivation of part of the waste which occurs in years of exceptional rain-fall, and which is of extremely little account in the assessment.

4. This difference between my plan and that used by Mr. Purser in the calculations now submitted is one which causes little or no difference of results; but I still think that my original plan should be followed, and I anticipate that Mr. Purser will agree. To effect this I would raise the banjar or barani rate a little in two of the chaklas which have most chance of barani cultivation, *viz.*, in Chakla Bet, chahi from Re. 0-1-0 to Re. 0-1-3, and in Chakla Purana

Nahri, from Re. 0-1-0 to Re. 0-1-1; and would strike out of the account the actual barani cultivation assessed by Mr. Purser at Re. 0-8-0 per acre. On the other hand, by way of simplification and general reduction (for I think the lump sum rates are pitched a little too high for a commencement of a new system), I propose to alter Mr. Purser's lump sum canal rates to the extent detailed in the following paragraph :—

5. (*a*).—I would put the rate on sugarcane at Rs. 1-12-0. I believe little or none is grown, but if it is grown at all, it can pay that much for five or six months of canal water.

(*b*).—I would reduce the rates on rice (not gardens) and cotton, respectively, to Rs. 2-12-0 and Rs. 1-12-0.

(*c*).—As to Class IV. (*a*), with the object of simplification and reduction (for the rates seem high compared with value of the crops), I recommend a reduction to a uniform rate of Rs. 1-6-0.

(*d*).—And, for the same reasons, with respect to the first four kinds of crop in Class IV. (*b*), a reduction to a uniform rate of Re. 1.

Extract of a letter No. 79, dated 30th March 1872, from W. E. PURSER, *Esquire, Settlement Officer, Montgomery, to the Settlement Commissioner, Punjab.*

* * * * *

Proposed system considered.

2. I consider the system proposed by the Financial Commissioner the only sound one as yet brought forward. I have always thought so, and should be glad to see the system extended to the river tracts; but I cannot say whether I ever advocated it officially or not.

Mr. Prinsep's objection.

3. I do not think Mr. Prinsep's objection to the scheme sound. The essence of the scheme is, if I understand it aright, that the village is to be assessed at what it can pay if it gets no canal water, and that it is to be charged so much per acre if it takes canal water, in addition to the jama that has been fixed without reference to its getting canal water or

not. If the canal totally fails, I think that the greater portion of the land in the canal villages will revert to its pristine state of jungle; but in that case, though the villages will not be able to pay the jamas now fixed without reference to the supply of canal water, still their break-down will be much more gradual than under the scheme advocated by Mr. Prinsep,* which consists in putting on a rate per acre which the villages could not pay if they got no canal water, but which they were to pay whether they did or not; and on the top of this another rate was imposed which was to be remitted if the canal failed. And it was supposed that by remitting this the villages would be secured against loss from failure of the canal. The basis of Mr. Prinsep's objection is, I think, the exaggerated opinion he entertained of what unirrigated land can pay in this district.

Certain villages assessed under the new system.

4. As directed by you in your letters under reply, I assessed nine villages in Dipalpur and announced the result to the people. I also informed them of the rates I proposed adopting. I also sent for Baba Khem Singh, who, besides Baba Sapuran Singh, is the only jagirdar whom it is necessary to consider in the matter. Unfortunately he had gone to Hoshiarpur, and it was too late when I heard of this to send for Baba Sapuran Singh. In working out the rates I adopted a 20 years' price current; but as I had no data to guide me, I was unable to carry out the instructions in the postscript to your letter No. 439½C., as regards increasing the estimates of out-turn.

Table of rates given.

5. I append a table showing the rates obtained by *adding* one-ninth the value of the gross produce per acre of the various crops *to the rates proposed by Mr. Palmer*, and also the rates I think may be adopted. I have fixed these rates principally with reference to the value of the produce; but in some cases I distrust the returns, and have classed the crops according to what I consider fair. Thus I put kungni a class lower than jowar, agreeing in this matter with Mr.

* If I remember right, Mr. Purser told me that Mr. Prinsep proposed to assess the cultivated area all round at 8 annas per acre barani rate, which certainly seems too high for a real barani rate.

(Sd.) J. B. LYALL,
Offg. Sett. Commr.

Palmer; but the returns do not justify this. As regards the spring crops, nothing but Mr. Palmer's rate has been applied to them *when they require well irrigation to come to maturity.* *

The well jama includes for them everything except water rate. I may here observe that it is not quite clear what rates are proposed by Mr. Palmer, for he says in paragraph 46 of his report that he does not think that the rates he gives can be taken till the Irrigation Department is prepared to relieve the people of the cost of making and clearing out their large and expensive water-courses. This he puts at 12 annas per acre. Are his rates then to be subject to a deduction of 12 annas an acre? † I have made no deduction and have taken his highest rates—those of 1873-74.

Statements showing villages assessed under new system.

6. Statements are attached showing in detail for three villages, one in each chak, the areas under the different crops; the present jama; that given by the rules laid down in your letter under reply; and, according to the rates I propose, I have chosen these villages out of those assessed because they represent different types. But the results observable in them are just the same as those met with in the other villages. The very large increase in the jamas seems to me to show that the rates are quite as high as is safe. One of the villages assessed broke down completely under the summary settlement jama of Rs. 1,000. The present rates will give upwards of Rs. 800. The village is assessed at Rs. 350. There is a village near Dipalpur, Nizam-ud-din, close to the canal, owned by Kumbohs, the best cultivators in the district. The tenure is *bhyachara*; the soil is good; expenses of clearing out water-courses are less than usual. This village has just got along when assessed at about Rs. 2 per acre. There is then some danger that weaker villages may break down if the rates are raised too high. The people

* The words which I have italicised explain why the rates for the first four crops of Class IV. (*b*) have been put higher than the value of gross produce would seem to justify, and higher than other crops of the class. These crops if they get one watering from the canal will ripen without further watering, and therefore no part of their assessment is considered to be included in the well jamas as is done in case of the other rabi crops. The argument is sound, but I think the rates proposed elsewhere for these four crops rather too high.

† No, because we have reduced his water rate by taking part of it as water-advantage rate. Even when our proposed rate, as in case of most rabi crops, is only equal to his, half of it will in account be reckoned as water-advantage rate.

(Sd.) J. B. LYALL,
Offg. Sett. Commr.

admit the well jamas are fair, but say the canal rates are very high. It might, perhaps, be well to reduce the rate on rice to Rs. 2-8-0, and that on cotton to Rs. 1-12-0, for the first two or three years. In introducing a new measure like this it is not advisable to take the uttermost farthing at once. Another point is that the extra items, amounting to about 20 per cent. of the jama, will fall heavily on the people when the large increase of revenue now proposed is taken. Of course they will not be paid on the water rate portion of the jama. I think then it is impossible at present to go above the rates I propose; while I should not consider it improper to go lower if I thought it likely my proposals would be accepted.

No advantage in progressive jamas.

7. There appears no great advantage in progressive jamas, while they are a source of trouble to the people. Whatever rates are adopted should be retained for five years unchanged, unless found too high. Rice and cotton might be made exceptions, but as regards even them an annual change seems expedient.

Objection made by the people.

8. The principal points urged by the people when I announced the rates to them were: that the rates were heavy; that unless the measurements were entrusted to the district authorities they would never get remissions even though their crops dried up; and that they ought to get remissions if the canal failed and they saved their crops by aid of their wells. The first objection is made as a matter of course. As regards the second, no doubt there will be always the risk that remissions will not be given when due; but if it is made a matter of agreement in the leases that remissions are to be given, it is to be hoped no great injustice will be done, especially as wholesale remissions will be very seldom necessary. The third objection seems of no great weight. If the people save the crop it is because it pays them to do so. If not, they can leave it alone and get remissions. But in order to encourage industry the Canal Officer could be allowed * to remit a certain portion of the lump sum abiana according to the amount of water the canal had given.

* I believe that Canal Officers have practically a power of the kind on all canals. If the supply of water has been very scanty, so that the crops, though not altogether destroyed, are very poor, remission is given by giving reduction in the area measured up as irrigated.

(Sd.) J. B. LYALL,
Offg. Sett. Commr.

8*a*. Attached to this report is a statement showing the estimated increase of revenue that may be expected from this new system. The result is nearly Rs. 59,000 for both land and water. I have assumed the area, irrigated by the canal to be only 60,000 acres, and have divided it among the various crops in much the same proportion as Mr. Palmer did the area he assumed as that irrigated. There is no doubt that 60,000 acres is a very low estimate. Assuming that one wheel can irrigate 25 acres on an average, and deducting the area given by multiplying the number of wheels in the three canal chaks by 25 acres from the total irrigated area shown in our returns, there remain some 85,000 acres whose irrigation is due to the canal. The income from that area may be taken as Rs. 1,44,312, as given further on, but the measurements were made to a great extent in an uncommonly good year;* and as the area irrigated fluctuates enormously, it is perhaps safer to keep 60,000 acres rather than to go higher:—

Estimated results from new system.

* This fact must be borne in mind in considering the results of the new system when applied to three specimen villages as shown by the Settlement Officer in an appendix to this report.

(Sd.) J. B. LYALL,
Offg. Sett. Commr.

				Rs.	A.	P.		Rs.
21,000	acres	rabi cultivation	...	@	0	14	0	@	18,375
15,000	„	rice	...	„	3	0	0	„	45,000
16,500	„	jowar	...	„	1	8	0	„	24,750
17,500	„	cotton	...	„	2	0	0	„	35,000
10,500	„	china, kungni, &c.	...	„	1	6	0	„	14,437
4,500	„	miscellaneous	...	„	1	8	0	„	6,750
85,000									1,44,312

9. There is no reason to believe the interests of the jagirdars will suffer.* They are entitled to nothing more than the Government share of the proceeds of the land, and that they will get. They are not entitled to any share of the earnings of the canal. It would be absurd if they were to be allowed to prevent a system being introduced that will be beneficial both to the zamindars and the public. If they object to the system, it will be easy enough to settle their villages on the old plan, and while collecting the revenue and abiana under the new system to pay over to them the amount which has been fixed on the old plan as their due.

Interests of jagirdars.

* As we have put the water rate only equal to the water-advantage rate, I don't think the jagirdar will have any fair grounds of complaint.

(Sd.) J. B. LYALL,
Offg. Sett. Commr.

10. As regards the proportions of the lump sum rates that should be credited to the Canal Department and to water-advantage rate, I do not think that the Canal Department will be satisfied with less than half. The average rate is nearly Rs. 1-11-4 per acre. Mr. Palmer wants to get as water rate alone Rs. 1-6-2. I certainly think he is entitled to half, and Re. 0-13-8 is a very fair water-advantage rate. Of course the extra cesses will be paid on this only.

Share due to water and water-advantage rate.

Note.—I am inclined to think that lambardars' and patwaris' fees should be charged on the whole lump sum rate; other cesses on the half.

(Sd.) J. B. LYALL,
Offg. Sett. Commr.

11. In assessing, the deduction of banjar rates will be made on a rough estimate of the average area cultivated.

Deductions on account of land-revenue proper.

Note.—In this matter the Settlement Officer has deviated from any plan, as I shall show in forwarding letter.

(Sd.) J. B. LYALL,
Offg. Sett. Commr.

12. I presume the Canal Department will make the usual allowance when land is irrigated by lift. None has yet been made in this district; the area so irrigated is small, but unless some allowance is made as on other canals, the new rates will be prohibitive.

Irrigated by lift.

Note.—I think it may be taken for granted that the allowance will be made.

(Sd.) J. B. LYALL,
Offg. Sett. Commr.

13. I have nothing further to add, except to express a hope that early orders may be issued about this matter. Every year that goes by without its being decided involves a loss of nearly Rs. 60,000 to Government. I can only repeat what I said

Early orders are solicited.

last year, that we cannot know in advance how the new rates will work. They must be tried. If they are too heavy they can be at any time reduced. If they are too low, as they are only to run for five years, they cannot cause any great loss. And in any case the loss will be only of a possible gain, not of an advantage actually now enjoyed.

Extract of a letter No. 340, dated 8th March 1873, from T. H. THORNTON, *Esquire, Secretary to Government, Punjab, to the Secretary to Financial Commissioner, Punjab.*

I AM to acknowledge your No. 1176, dated 2nd December last, on the system to be followed in assessing villages of the Dipalpur Tahsil irrigated by inundation canals.

2. The system which is proposed to be here adopted is generally approved by the Lieutenant-Governor, who has long been of opinion that some such procedure was advisable in tracts exceptionally situated like that of Dipalpur, where the rain-fall is exceedingly scanty, irrigation from canals uncertain, and the soil unproductive without it. Proposals somewhat similar were made by him with reference to this tract many years ago, and in the review of the last Revenue Report of the Punjab the Lieutenant-Governor's opinion was conveyed as to the advantage of carrying out such a system as is here described. His Honor will watch the result of the experiment with great interest, and would desire the Financial Commissioner to pay every attention to its starting and working.

3. The amounts of the rates proposed by the Financial Commissioner are approved, as also the system by which the fluctuating revenue shall be paid and announced annually. The Lieutenant-Governor would, indeed, prefer that the whole collections should be made through the tahsildar, and not by the Canal Officer at all; but this question is one of administration, and orders can be passed upon it hereafter. He would, however, express his full concurrence in the view of the Financial Commissioner that the revenue agency—patwaris and lambardars—should be employed as much as possible. The Lieutenant-Governor considers that five years will be a fair period for which the rates should be announced.

4. As to the division of the sum obtained from the collection of these rates between canal and revenue, the Lieutenant-Governor is not disposed to consider the question one

of much importance in itself. It appears to him equitable in a tract situated like Dipalpur, where cultivation entirely depends on irrigation, that the whole of the fluctuating revenue imposed on canal-irrigated land should be credited to the Canal Department,—a fixed portion only of the assessment being credited to land revenue. The decision of this question will probably influence the amount of cesses leviable upon the canal income. The local cess under the Act is only leviable as a percentage on the land revenue, and, if the whole of the fluctuating revenue be credited to canals, it will not, without the sanction of the Government of India, be possible to deduct cesses from it.

A reference will, however, be made to the Government of India on this point, and until further orders are received it will not be possible to determine what shall be the proportion allotted to land revenue and to canals, and what portion of the revenue shall be liable to payment of the local cess.

Extract of a letter No. 803 *dated* 29*th September* 1873, *from Secretary to Government of India, Department of Agriculture, Revenue and Commerce, to Secretary to Government, Punjab.*

* * * * * *

2. His Excellency the Governor-General in Council has had the advantage of considering these papers in communication with Mr. Egerton, Financial Commissioner of the Punjab, and has given his best attention to the important points involved in the correspondence.

3. In regard to the question of crediting the assessment derived from land irrigated by canals to the Irrigation Department, the Governor-General in Council is of opinion that to allow this would cause grave inconvenience. His Excellency considers that the object in view will be fully attained by having three sub-heads under the general head of Land Revenue. Under the first of these sub-heads will be shewn the fixed *barani* assessment, or the rate which would be leviable on unirrigated land; under the second, the fixed assessment on lands irrigated by wells; while under the third sub-head will be shewn the fluctuating revenue derived from lands irrigated by canals. This last will be the amount which the Irrigation Department will be entitled to show in their administrative departmental accounts as the financial result of the canals under their charge.

EXTRACT No. IV.

FLUCTUATING CANAL RATES AND SPECIAL ARRANGEMENTS FOR RIVER-SIDE VILLAGES, MONTGOMERY.

[The following remarks on the fluctuating canal assessments and the arrangements made for the revenue of river-side lands are taken from the correspondence connected with Final Report of the Montgomery Settlement.—H. C. F.]

Extract of a letter No. 1052*S., dated Lahore,* 10*th October* 1876, *from* W. M. YOUNG, *Esquire, Settlement Secretary to Financial Commissioner, Punjab, to the Officiating Secretary to Government, Punjab, forwarding the Final Report of the Montgomery Settlement.*

* * * * * * * *

Fluctuating system of assessments in Dipalpur and Pakpattan.

5. In paragraph 11 of his review Mr. Lyall shows that the irrigated area in these tahsils during the years 1874—1876 has been somewhat in excess of Mr. Purser's estimate, while his estimate of the average incidence of the fluctuating revenue was too high. The differential rates appear to have tended to diminish the cultivation of the higher rated kharif crops; but Mr. Lyall thinks the decrease only temporary, except in regard to rice cultivation, and that the class of crops cultivated will gradually improve. The canal villages are now paying between 50 and 60 per cent. more revenue than they paid before the revised settlement, and this fact should weigh, Mr. Lyall thinks, against increasing the rates when the term of five years, for which they have been temporarily sanctioned, shall have expired. The Financial Commissioner agrees with Mr. Lyall in thinking that the fluctuating rates include both owners' and occupiers' rates—a fact which may be inferred from the jagirdars being allowed to take half the fluctuating rate in jagir villages, and that the alternative suggested by Mr. Purser in Part II., Chapter II., paragraph 35 of his report, for levying an owners' rate over and above the fluctuating assessment, cannot be adopted, though the consolidated rates may be revised.

Working of the system.

6. The Financial Commissioner concurs in Mr. Lyall's opinion that the new system is on the whole working well. The reports on

the annual measurements by the patwaris show that the difficulties connected with this part of the system are being gradually overcome. Whether the fluctuating rate is paid by the tenant, as anticipated by Mr. Purser (in the paragraph above quoted), or whether, as Mr. Lyall thinks (paragraph 11), the proprietor has had to lower his rents and thus virtually bear a portion of the charge, there can be no doubt that the new system is fairer than the old, and better suited to the circumstances of the tract. In view of the remarks contained in the preceding paragraph, Mr. Egerton is of opinion that great caution will be required before raising the present crop rates. It must be remembered that the cost of clearing the long water-courses is unusually heavy here, and that the profits of agriculture are much diminished from this cause. If at any future time rajbahas are made which will diminish the length of the zamindars' water-courses, the rates may be fairly revised.

Extract of a letter No. 46M., dated Murree, 25th August 1876, from J. B. LYALL, *Esquire, Settlement Commissioner, Mooltan and Derajat Divisions, to Settlement Secretary to Financial Commissioner, Punjab, forwarding Mr. Purser's Final Report on the Montgomery Settlement.*

* * * * * * * *

Our fixed assessment partly responsible; comparison of former and present systems of assessment.

5. Our system of fixed cash assessment is also partly responsible. The system was not unknown under the Native Governments which preceded us, but applied only to wells, and, as a rule, to wells in the upland tracts only. The system is most applicable to them, as they are to some degree independent of the seasons. Why they are not at all completely independent is very well explained by Mr. Purser in paragraph 9 of his chapter on agriculture. In years of drought the owners of these upland wells often have to abandon them and go off to places where they can find fodder for their cattle. Under Native Governments, when each well was in respect of assessment a separate estate, I think well-owners who went off in this way generally escaped payment of revenue for the time. Under us the lambardars who have to make good the total demand on the village almost always contrive to exact payment even when the well has been out of

cultivation for several successive years. There was no fixed assessment in former times on lands depending on canals or river floods. Khalsa villages generally paid in cash, and had to get the money from their sahukars; but the demand was based on the assessed value of a share of the actual crop, and the sahukars who advanced the money did so on the security of that same crop. The transaction was a simple one, and not likely to involve the zamindars in debt. Moreover, I fancy that the transaction was generally between the headman of the village and the sahukars, not between the latter and every individual petty proprietor; for Lieutenant Elphinstone says in his report that even down to the end of the second summary settlement it was the almost universal custom in the river villages for the headmen to pay the revenue and collect in kind from the other shareholders. These headmen were better able to cope with the sahukars and to withstand the effects of vicissitudes of the floods than the smaller proprietors. Under a system of fixed assessment of each holding some of the latter might be ruined by a very small change in the course of the river if it happened to divert the floods from their particular fields. Though the system of fixed assessment of sailaba lands was eased off during the summary settlement by the lease being practically held only by the headmen, yet the variations of the floods were great enough to cause much difficulty. Lieutenant Elphinstone, in paragraph 96 of his report, says that large changes in the directions of the floods occurred in pargannas Gugera and Pakpattan, and the mode in which the revenue was realized in estates whose summary assessments had broken down is described in his paragraph 3.

Working of the regular settlement assessment of river-side villages.

6. Still greater difficulties were after a time found in working Lieutenant Elphinstone's regular settlement assessment of river-side villages. The great distress in many of them led, as I have already said, to a revision being undertaken immediately on the expiry of the term. There seemed to be some general diminution of flood water both in the Sutlej and Ravi, due to causes unknown, though often attributed, in the case of the Ravi, to the Bari Doab Canal. There were also great alterations in the directions of the floods on both rivers. Lieutenant Elphinstone had remarked that the sailáb of the right bank of the Ravi was

superior to that of the left bank. Mr. Roe (*see* paragraph 20, Chapter II., Part II.) found that in his time, owing to a change in the set of the river, the superiority had changed sides.

The remarkable decrease of cultivation in the river circles on the Sutlej, exhibited by the returns of the revised, as compared with those of the regular, settlement, is shown in the statements of increase and decrease given for tahsil Pakpattan in page 336, and for Dipalpur in page 343, of Mr. Purser's report. Part of the difference was accidental, being due to the fact that the year of Lieutenant Elphinstone's measurements was a favorable one, and that of our measurements a somewhat unfavorable one; but great part of the difference was real and *quasi* permanent. Owing apparently to a series of years of low floods, and still more to changes in the set of the river, large tracts of land which were cultivated by wells and flood water at the regular settlement were found to have got no flood water for several years, and consequently to have entirely fallen out of cultivation.

The rules for the annual re-assessment of lands liable to river action do not take into account the fluctuations of the floods. The only way therefore in which relief could be given to villages injured by change in the set of the floods was by special remission or reduction of revenue, and no counterbalancing increase could be taken from villages which gained. Most district officers hesitate to recommend special remissions or reductions; till Mr. Blyth saw the necessity of acting, very little seems to have been done in this way.

No doubt the heavy indebtedness of a number of river-side villages is due in great part to the way in which the system of fixed assessment of sailaba lands was worked during the term of the regular settlement.

Proposals for fluctuating assessments of sailaba lands disapproved; distress of some villages on the Ravi owing to alterations in the set of the Ravi in 1873 and 1874.

7. When I first visited the district in February 1872 the sailaba villages on the Ravi had been actually re-assessed on the fixed system, and similar assessments have been announced, though not put in force, for those on the Sutlej. I was

much struck by what I saw, and encouraged Mr. Purser to revive Mr. Vans Agnew's proposal of a fluctuating assessment of sailaba land. The nature of these proposals and the reasons why they were not sanctioned are briefly noticed in page 353 of Mr. Purser's report. I have not heard that there has yet been any difficulty in collecting the new assessment of sailaba villages on the Sutlej; but I understand that the set of the Ravi changed sides completely in the years 1873 and 1874, and that in the latter year many villages were in great distress in consequence. I believe that proposals for remission or reduction were submitted by the district authorities, but that orders were deferred pending further enquiry, and that the proposals were not repeated in the following year because the villages concerned were found to have been much benefited by the unusually extensive floods of 1875.

The head of the Nikki Canal, which is a channel by which the flood-water of the Ravi managed in most years to reach some 32 villages, has, I hear, been deserted by the river, nor does it seem practicable at present to re-open it.

* * * * * *

Suggestions for working the assessment of the river-side villages.

10. Though the revised settlement has not been finally sanctioned, it would be difficult to introduce any new system of assessment of sailaba lands, now that the fixed jamas have been announced and acted upon for several years. But the variations of the floods should be carefully watched, the patwaris should be made to give in each year a return for each village in the river circles of the area of sailaba, chahi-sailaba, and kassi-sailaba cultivation. These returns should be translated into English and entered in a mauzawar register, which would show the Deputy Commissioner at a glance the villages in which sailaba cultivation was declining to a dangerous extent, and the system proposed by Mr. Purser and myself might be at once put in force for all villages which may hereafter apply for reduction on account of failure of sailab. We shall lose some revenue by this, unless by good luck the floods return during term of settlement to the villages concerned; but we shall do away with the only considerable cause of indebtedness directly due to our revenue system.

The new system of assessment of canal-irrigated lands adopted in this settlement: how it was worked up to date.

11. The plan adopted at present settlement for the assessment of lands irrigated from the Khanwah and Sohag canals in tahsils Dipalpur and Pakpattan is described in paragraph 35 of Chapter II., Part II.

The canal rates by which the fluctuating revenue is assessed are of the nature of combined owners' and occupiers' rates; in jagir villages half this revenue goes to the jagirdar, the other half representing approximately what would elsewhere be separately charged as occupiers' rate. Mr. Purser in his Dipalpur assessment report estimated the future annual average area of irrigation from these canals in Tahsil Dipalpur at 60,000 acres *per annum*, and the revenue from the canal rates at Rs. 1,02,312. If he had taken into account the lands irrigated by these canals in Tahsil Pakpattan, his estimate would have been about 65,000 acres and Rs. 1,09,812.

From the annual report of the Irrigation Department for the three years the new assessment has been in force, I gather that the area measured up as irrigated and the fluctuating revenue assessed and realized by the canal rate has been as follows:—

	1873-74.	1874-75.	1875-76.
Area irrigated	Acres 61,353	Acres 74,065	Acres 114,755
Fluctuating revenue assessed	Rs. 73,178	Rs. 99,734	...
Fluctuating revenue realized	„ 63,479	„ 88,368	Rs. 61,593

The small area irrigated in 1873-74 appears to have been due partly to the fact that there was unusually little water in the canals, and partly to fear of the new rates, which induced many zamindars to decline to take water. The large area returned as irrigated in 1875-76 appears due to the heavy floods of that year; more than three-fifths of it was rabi irrigation.

The difference between revenue assessed and realized in the first two years seems to have been mostly due to remissions on account of excess measurements or crops not brought to maturity; it was also due in small part to the fact that nine or ten villages are at present protected from the new rates, the term of their original settlements not having yet expired. The revenue of 1875-76 looks very small when

compared with the irrigated area. The fact appears to be that they are not properly comparable—the area is that of the agricultural year and the revenue that of the financial year. The kharif area of 1875-76 was not large, and many remissions had to be given on account of crops destroyed by the floods: the area of the following rabi was very large, but the revenue due on it will belong to the year 1876-77.

The results so far would seem to show that Mr. Purser's estimate of the average annual area of irrigation was a little too low, and that his estimate of the average incidence of the fluctuating revenue was too high. The fact that the new canal rates are differential seems, as we anticipated, to have tended to diminish the cultivation of the higher-rated kharif crops, but except as regards rice this tendency is probably only temporary. According to native report rice is now only cultivated in low-lying lands which are not fit to grow anything else. As the quality of the rice is not good, the rate it bears is no doubt comparatively high. I have no doubt that the class of crops cultivated will gradually improve, and that the proportion of kharif to rabi irrigation will in future be greater than it has been in these three first years; if so, the fluctuating revenue may rise to the amount of Mr. Purser's estimate. When this point is reached the canal villages will be paying between fifty and sixty per cent. more revenue than they paid before Mr. Purser's settlement—a fact which should weigh heavily against an increase of the rates if the Canal Officer propose to raise them when the term of five years, for which they were sanctioned, expires. I lately got from the tahsildar of Dipalpur a list of the canal villages in his tahsil showing the paid revenue and abiana paid in 1870-71, and the fixed and fluctuating revenue paid in 1874-75; the result was an increase of forty per cent., though the fluctuating revenue of these villages for 1874-75 amounted to Rs. 80,934 only.

The new canal rates are not, as Mr. Purser expected, borne entirely by the tenant; the tenant almost always pays them just as he paid the old abiana rate of 8 annas, but the proprietor has had to considerably reduce the tenant's rent in consequence. What has happened is as follows:—formerly the tenant paid to the proprietor one-third produce if the latter cleared the char or water-course (as he usually did), and one-fourth only if he, the tenant, effected the clearance.

Now, where the proprietor clears the water-course the tenant pays him one-fourth instead of one-third as before; the proprietors have in fact been compelled to lower the rate of their rents by a fourth. I hear also that in spite of such reduction the tenants complain of having to pay the canal rates, and that a certain number of them have lately deserted the canal villages in consequence.

The new assessment of the canal villages appears to me to be working well on the whole. I hear that the zamindars still grumble and profess to prefer the former system of assessment, but that was to be expected, seeing that the fluctuating system happens to be associated in their minds with an increased demand. The Canal Officers appear to have succeeded in getting satisfactory returns from the patwaris and in overcoming other preliminary difficulties.

Extract from Part II., Chapter II., of the Final Report of the Revised Settlement of the Montgomery District.

* * * * * *

Assessment of canal lands.

Early management.

34. Before assessing the two Sutlej tahsils, Dipalpur and Pakpattan, in respect of the land revenue, it was necessary to decide the rates which were to be paid by the people for canal water, and the principles on which these rates were to be fixed and collected. In the Sikh time the Khanwah and Lower Sohag supplied certain villages in this district with water. It was not till 1843 that any water rate was levied. The rate then imposed was one anna per kanal on crops that came to maturity, and applied only to the Khanwah. Under English rule this rate was continued. At first a farm used to be given of this tax, and yielded on an average Rs. 9,000 to Rs. 10,000 annually. The charge was extended to the Lower Sohag. In 1855, Mr. Vans Agnew, the Settlement Officer, proposed assessing canal-irrigated and sailaba lands in a new way. He thus describes his method :—

Mr. Vans Agnew's scheme.

"I have fixed two jamas for every village, the one upon all kurwah or well-lands, which can be cultivated without the aid of inundation from the rivers or canals, to be *permanent*, and to be considered the fixed demand until the expiry of the period of settlement; and the other upon all sailaba, to be *variable*, and under the name of abiana in canal lands, and of river sailaba jama in those subject to the influence of the Sutlej, to fluctuate with the uncertain inundation and to be annually revised."

The variable rates proposed were per acre Rs. 1-11-0 in Dipalpur, Rs. 1-8-0 in Hujra, and annas 12 in Basirpur chaks. Along the river they ranged from Rs. 1-10-0 to annas 6 per acre. This scheme was suggested on account of the uncertainty of the river inundations and canal-water supply. As regards the canals, Mr. Vans Agnew wrote :—

"The irrigation they afford is uncertain and constantly varying. Firstly, in the aggregate annual volume of water they carry. Secondly, in the quantity of water they supply to each village. Thirdly, in the time when they yield that supply. Fourthly, in consequence of their being in a transition state, fresh arrangements of the Canal Officers continually altering the direction of the water-supply."

His proposals were rejected. The Financial Commissioner, in his letter No. 962, dated 26th March 1856, laid down the principle to be adopted which, according to Lieutenant Elphinstone, was this :—

"In the river sailab lands, a moderate assessment which the proprietors could be able to pay in ordinary years; in the canal villages, a division of the demand between land rent and abiana in such proportion as to represent with proximate correctness their relative values, the assessment at the same time being fixed at so moderate an amount that no reduction of abiana should become necessary in ordinary years."

Another scheme adopted.

On this principle Lieutenant Elphinstone assessed :—

"In the canal villages the demand has been divided between land and water rent; and the relative value of these has usually been assumed in accordance with the agreement arrived at on this point by Major Brown and myself in May 1856, as bearing to each other the proportion of 2 to 3."

The arguments brought forward against Mr. Vans Agnew's scheme were the difficulty of ascertaining the yearly sailaba area and the worry of annual measurements. The permanent water rent or fixed abiana amounted to Rs. 25,110. The canals broke down almost immediately, and Rs. 20 per cent. had to be taken from the land tax and added to abiana. This raised the fixed abiana to Rs. 37,083. In villages where the water charge was not fixed, lands irrigated from the canals paid the old rate of one anna per kanal.

35. This system did not work satisfactorily. The people had no object in economizing water, and they wasted it. It was found that many villages were paying next to nothing for their water. The canal tracts were not bearing anything like a fair share of the public burdens; and the revenue credited to the canals was far from equalling the expenditure incurred in keeping them up. It was also known that the prosperity of the canal tracts depended entirely on the canals, and that if the canals were abandoned the country would relapse into jungle. It was therefore only fair that the canal rates should be raised. A good deal of correspondence took place on the subject, and the result was the adoption of the main principle of Mr. Vans Agnew's scheme. Each village was to be assessed at a sum which would represent what it could fairly pay from its natural products, barani and well cultivation. This was to be fixed land revenue. Besides this fixed jama, villages taking canal-water were to pay for it separately. The area irrigated was to be ascertained by annual measurements, and the rates of charge were to vary with the crops grown. If the crops did not come to maturity owing to the failure of the canal, no abiana was to be paid. In case of partial failure of crops, partial remissions might be made. Lands irrigated by lift were to pay half the rates fixed for lands irrigated by flow. The amount payable each year was to be announced to the lambardars by the Canal Officer. His Excellency the Governor-General in Council sanctioned the proposed arrangement, with some modifications, for five years (No. 803, dated 29th September 1873, from Secretary to the Government of India, to the Secretary to the Government of the Punjab). No portion of the fluctuating revenue was to be credited as proposed to the Canal Department; but there were to be—

Plan adopted at present settlement.

"Three sub-heads, under the general head of land revenue. Under the first of these sub-heads will be shown the fixed barani assessment or the rate which would be leviable on unirrigated land; under the second the fixed assessment on lands irrigated by wells; while under the third sub-head will be shown the fluctuating revenue derived from lands irrigated by canals. This last will be the amount which the Irrigation Department will be entitled to show in their administration departmental accounts as the financial result of the canals under their charge."

Extract of a letter No. 850, *dated Lahore, the* 30*th July* 1877, *from* LEPEL GRIFFIN, *Esquire, Officiating Secretary to Government, Punjab, to the Secretary to Financial Commissioner, Punjab, reviewing the Final Report of the Montgomery Settlement.*

* * * * * *

2. The distinguishing feature of the Montgomery settlement was the fluctuating system of assessment sanctioned for a period of five years in the canal-irrigated tracts of the Dipalpur and Pakpattan tahsils. In discussing the rates levied under this system, Mr. Purser, in paragraph 35 of Chapter II., Part II., of his Report, raises the question whether the tenant or the proprietor will bear the incidence of the enhanced demand. He does not consider that this question can at present be answered positively, but expresses the opinion that the tenants will pay the increased rates, and suggests that if this be the case, the rates should be still further raised so as to reach the proprietor's share of the produce; or—as an alternative to this proposal and on the hypothesis stated—that the principle of an owners' and occupiers' rate should be introduced. There can be no doubt that the present fluctuating rates include both occupiers' and owners' rates; the suggestion for raising them depends upon an hypothesis admittedly unverified; and should it be considered necessary to revise them on the expiry of the five years' settlement, great caution will have to be exercised before they can be raised. The assumption in your paragraph 7, that the contribution towards the extra cesses to be paid out of land revenue under the orders of the Government of India, in the Revenue, Agriculture and Commerce Department, No. 803, dated 29th September 1873, is to be made only as regards the fluctuating revenue, is unquestionably correct.

3. The remarks of the Settlement Commissioner in paragraphs 6-8 inclusive of his letter No. 46 M., dated 25th August 1876, regarding the working of the regular settlement assessments of river-side villages, should be commended to the special attention of the district officer, as proposed in your paragraph 8. The village register should be maintained as suggested, and, when necessary, prompt measures of relief should be applied. The Deputy Commissioner should also devote peculiar care to the revenue management of upland wells, as recommended in the 9th paragraph of your letter.

[The Montgomery system has been found after seven years' experience to work very well, and the plan proposed for the river-side villages there has been extended to other districts also, and is about to be extended to certain villages to which it was not originally applied in Montgomery itself.—H. C. F.]

EXTRACT No. V.

RIVER-SIDE VILLAGES AND CANAL-IRRIGATED LANDS IN MOOLTAN.

[The next proposals for a fluctuating assessment were those made for a cycle system of revenue in the Muktsar Tahsil of the Ferozepore District, and which are printed on page 153 of this collection. But as these referred to rain-land tracts and were not considered necessary at the time, and as the question of river-land assessments was dealt with in Mooltan and Derajat divisions on the precedent of the lines laid down in Montgomery, it will be convenient to first turn to these. The district primarily concerned is Mooltan itself, where the present system did not find favor at the first regular settlement. What was done then and has been done now will be seen from the following extracts.—H.C.F.]

FORMERLY.

Extract of a letter No. 776, *dated Lahore,* 23*rd August* 1860, *from* R. N. CUST, *Esquire, Officiating Financial Commissioner, Punjab, to the Secretary to Government, Punjab, forwarding the Final Report of Mr. Morris's Settlement of the Mooltan District.*

* * * * * *

Treatment of sailaba lands.

12. The Commissioner and Mr. Morris differ on the mode of settling the extensive sailaba land. Mr. Morris, in obedience to the positive orders of Mr. McLeod, supported by the opinion of Sir J. Lawrence, has assessed the whole at low rates so as to secure the collection in ordinary seasons, subject to the usual relief granted by the rules regarding diluvion. Mr. Morris has also provided a certain scale of reductions in case of a general failure of the flood. The Commissioner, on the other hand, would have maintained the system introduced at the second summary settlement of annual measurements of the whole tract, and assessment at certain rates. The reason for this is, that the outturn of these lands is, in the opinion of the Commissioner, so variable, that no assessment can in some years be paid, while in other years the profit to the landowner is enormous. Mr. Morris distinctly records his opinion that the sailab lands are not so variable as to prevent a light jama being paid, and he has accordingly assessed the whole.

Advantage of course adopted.

13. Amidst the conflict of opinions of local officers with considerable ability and experience on both sides, I rejoice that a plan has

been adopted which is consistent with what, in my opinion, is the only expedient course. It is true that we may in some years lose revenue, but the loss is a gain to the material interests of the people, if that revenue were only to be attained by annual measurements on a gigantic scale, with all the attendant inconvenience and malpractices. It is true that Mr. Morris's expedient of remission is but a half measure, but he remarks with justice that the experience of the last ten years has not shown much variation in the collections, and after all much must be left to the judgment of the district officer. At any rate for the term of this settlement let us give the system a trial. It is early to seek finality in the revenue arrangements of a newly-conquered country. With regard to the question of diluvion and alluvion, general rules are now under consideration.

Extract of a letter forwarding the Final Report of his Settlement, No. 29, *dated Camp Mooltan,* 24*th February* 1859, *from* J. H. MORRIS, *Esquire, Settlement Officer, Mooltan, to the Commissioner and Superintendent, Mooltan Division.*

* * * * *

AND I will now proceed to notice one other point closely connected with the assessment before giving the fiscal results of my proposed settlement: this is, whether it will be advisable or not to retain the system introduced at the second summary settlement of annual measurements and variable jamas for all lands subject to inundation from the rivers.

13. This system was introduced by the Deputy Commissioner at the second summary settlement, on the ground that the returns from these sailaba lands were so precarious that a fixed jama for a number of years could not be regularly collected from them. Now there can be no doubt but that some of the sailaba lands in this district, especially those on the Sutlej, are liable to considerable variations; but still I am of opinion that the amount of such lands is trifling compared with those from which the returns are tolerably secure.

14. The returns from all sailaba lands must be in some measure uncertain; but still I see no reason why they should be more so in this district than in others also subject to the action of these very rivers, and from which permanent

jamas are regularly realized. Moreover, the following strong objections may be urged against the present system:—

1*st.*—It entails annual measurements, which are in my opinion highly objectionable, being injurious in their effects, inquisitorial in their nature, and affording great opportunities and inducements for fraud.

2*ndly.*—It is detrimental to the interests of Government, and entails a loss of Government revenues, there being comparatively speaking very few instances in which the measurement has not been followed by reduction on the jamas as fixed at the second summary settlement, notwithstanding that some of the past seasons have been considered highly favorable.

3*rdly.*—It is unpopular, nearly all the proprietors of the more important river villages having petitioned me for a fixed and permanent assessment.

4*thly.*—It is entirely opposed to the fundamental principle of our revenue settlement, and at the best but little better than a system of "Kham Tahsil."

15. For the above reasons, therefore, I do not advocate a continuance of the past system, and my proposed assessment has accordingly been made on the understanding that for the future the revenue from these lands will be collected in the same manner as from all others, subject of course to the ordinary and regular rules regarding increment and decrement, similarly as with all other such lands in the Punjab.

16. But, though strongly opposed to any regular system of annual measurements and variable jamas, still it seems to me quite possible, in consequence of the variable nature of the irrigation afforded by both the rivers and canals, that in some particular seasons a remission of a portion of the revenue in certain classes of villages may be found both expedient and necessary. Such instances will be rare, and may probably not occur within the term of the settlement; but still being possible, owing to the peculiar and uncertain nature of the irrigation, I have considered it advisable to provide against such by proposing a general remission to be granted to the tract so affected.

17. With this view, therefore, I have prepared lists (*vide* Appendices G., H. and J.) of all the villages irrigated by each of the rivers and canals respectively, together with the amount of revenue in each, a portion or the whole of which will be liable to remission, according as the irrigation has failed partially or *in toto*. And here I must explain that these arrangements are meant by me to provide for instance of *general* failure of irrigation in any tract, which no assessment, however light, can provide for, and not to meet individual or trifling cases of a deficient supply of water, for which the very moderate assessment proposed by me ought to suffice; whilst, of course, the percentage of remission to be granted must depend on the nature and extent of the failure experienced.

18. For instance,—assume that there has been a great and general failure of the Sutlej inundation in any particular year, and that after investigation it is deemed necessary to remit 25 per cent. of the revenue; then the amount to be remitted will, according to Appendix G., No. 2, be 25 per cent., or one-fourth of Rs. 15,845, *viz.*, Rs. 3,961, of which each of the 138 villages watered by the Sutlej will receive its quota in proportion to the amount entered against it in the abovementioned statement. So again with the canals,—should there be a general failure in any particular canal, and remission of revenue be deemed necessary, the district officer will first have to determine on the percentage of reduction required, and then calculate the amount that will be due to each of the villages watered by the canal as shown in Appendix H. or J.

19. In short, then, though strongly opposed to any regular system of annual measurements and variable jamas on account of any particular description of lands, still I am of opinion that in a district like that of Mooltan, with its shifting sailaba and uncertain canal irrigation, a *general* remission of a portion of the revenue in certain tracts will, in some extreme instances, be found highly desirable; and, accordingly, I have grouped together all the villages situated in such tracts, and calculated for each, from the statistical data furnished by my settlement records, the amount of revenue dependent on the particular description of irrigation, on account of the partial or total failure, of which it may hereafter be deemed advisable to grant remissions in any

one year. Such then is the general principle on which I have proceeded in assessing these lands, and the adoption of which I strongly advocate in the future working of this settlement; whilst for any further information and statistical data regarding these remissible jamas, I must refer to the detailed statements attached to this report.

Now.

[At the present settlement, in view of the great increase of cultivation, the development of the canals, and the question of the abolition of "cher" labor, a system of fluctuating revenue for the canal and river-side lands of Mooltan had again to be considered with the light of experience gained by its working in the Montgomery District.—H. C. F.]

Extract of a letter No. 1066, *dated Lahore,* 14*th October* 1876, *from* W. M. YOUNG, *Esquire, Settlement Secretary to Financial Commissioner, Punjab, to the Officiating Secretary to Government, Punjab, forwarding the Revenue Raté Report on the Serai Sidhu Tahsil of the Mooltan District.*

* * * * * *

11. After considering the circumstances of the Bhet and Hittar circles, the large produce estimate, the relative incidence of the proposed rates and those obtaining in similar circles of other districts situated on the Ravi and Chenab, the Financial Commissioner arrived at the conclusion that the proposals for these circles did not represent the amount which might fairly be demanded. He accordingly addressed the Settlement Commissioner in my No. 41S., dated 19th August 1876, which is herewith forwarded, together with Mr. Lyall's reply No. 45M., dated 21st August. The arguments used by the Financial Commissioner in addressing the Settlement Commissioner need not be repeated. It seemed to Mr. Egerton that the very reasons which prevented the Settlement Commissioner from proposing a larger fixed demand from these circles should have led him to view favourably the introduction of the fluctuating system of assessing alluvial lands which has worked with success in portions of the Bannu and Dera Ismail Khan Districts, and has been suggested as an alternative mode of assessing these chaks by Mr. Roe in paragraphs 122 *et seq.* of his report. The Financial Commissioner accordingly suggested that it might be proper either to raise the fixed assessment or to introduce the fluctuating

(1) Chaks Bhet and Hittar.

system of assessment. From Mr. Lyall's reply it appears that he considers the sums mentioned by him, *viz*:—

		Rs.
	Chak Bhet	... 17,123*
	Do. Hittar	... 10,438

*There is a miscalculation in paragraph 1 of Rs. 500.

as the highest which could be levied with safety in the shape of a fixed assessment. If, therefore, a fixed assessment is to be sanctioned, Financial Commissioner would recommend these assessments for acceptance.

The system of fixed assessment not suitable for these tracts.

12. With reference, however, to the remarks of His Honor the Lieutenant-Governor, conveyed in your No. 1121, dated 6th August 1875, on a special report submitted on the failure of sailab in certain villages of the Montgomery District, a tract immediately adjoining the Bhet Circle, the Financial Commissioner hesitates to accept the recommendations of the Settlement Commissioner and Settlement Officer for adopting a fixed assessment in the Bhet and Hittar circles. Not having seen the Sarai Sidhu Tahsil, the Financial Commissioner has great hesitation in expressing an opinion which differs from that framed by these officers. But it has been asserted, and is generally admitted, that a fixed assessment on such tracts, however low, may from failure of sailab become too heavy, and may have to be still further reduced; while Government obtains none of the increase which may reasonably be demanded on account of villages which have gained new sailab, unless the land was classed as barren at settlement.

General proposals for assessment of sailab.

13. The Settlement Commissioner has reported upon a general system of revenue administration for sailab tracts, which is being separately considered, and will shortly be submitted for the orders of Government. This system consists of a fluctuating assessment corresponding to the alternative proposal made by the Settlement Officer; but Mr. Lyall states that it is not applicable to the Sarai Sidhu Tahsil, where the sailab is more certain.

Settlement Commissioner's modified plan.

14. In his letter forwarding Mr. Roe's report, paragraph 20, Mr. Lyall proposes a modified plan which would result in the imposi-

tion of a shifting assessment on the whole sailab tract, limited to the sum fixed at settlement. He proposes that any loss to Government accruing from the failure of sailab in any village or villages should be recouped by an extra assessment imposed upon land recorded at settlement as abandoned or culturable wastes in other villages, which may have been brought under cultivation by sailab. In regard to this plan the Financial Commissioner observes that the adjustment of the demand upon different villages year by year would require more attention than the district officials could give, and there would be danger of the assessments being affected by favoritism or intrigue. It is much more simple to measure and assess the sailab of each village, and to assess it on its own merits, than to adjust such an assessment on other villages with reference to their condition.

Financial Commissioner's recommendation for chaks Bhet and Hittar.

15. Mr. Egerton therefore recommends that the alternative proposal of Mr. Roe for a fluctuating assessment of sailab land should be adopted. No doubt this plan will necessitate the employment of the tahsil establishment upon this duty to the neglect perhaps of their judicial work during some months of the autumn and of the cold weather, but in view of the circumstances above mentioned it appears to him to be the proper way of assessing the Bhet and Hittar circles.

The assessments framed by Mr. Roe on this basis amount to the following sums :—

	Rs.
Chak Bhet	19,428
Do. Hittar	11,644

representing an increase of 63 and 37 per cent. respectively in these chaks. But considering that the collection of these amounts will depend each year on the capability of the tracts to pay them, and that the assessments hitherto levied have been, out of all proportion, light, he does not anticipate that any difficulty will be experienced in working the system.

The rates proposed by Mr. Roe under this system of assessment, to which the Financial Commissioner would

recommend that sanction should be accorded, are as follows :—

Circle.	On wells with sailab.	On wells alone.	On jhallars.	On culturable waste per acre.	On Sailab.		
					1st Class.	2nd Class.	3rd Class.
	Rs.	Rs.	Rs.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
Bhet ...	25	16	20	0 1 0	1 8 0	1 0 0	0 8 0
Hittar ...	30	20	20	0 1 0	1 8 0	1 0 0	0 8 0

It will be borne in mind that the results obtained by applying these rates given above are only estimates, and that the actual amount leviable from year to year may be more or less than those amounts, according as the sailab is more or less extensive than that measured for the purpose of assessing.

Extract of a letter No. 455, dated Lahore, 19th May 1877, from W. M. Young, *Esquire, Settlement Secretary to Financial Commissioner, Punjab, to the Officiating Secretary to Government, Punjab.*

In paragraphs 11-15 of the Review of the Sarai Sidhu Assessment Report (my No. 1066, dated 14th October 1876), the Financial Commissioner proposed that the assessment of chaks Bhet and Hittar should be made on a fluctuating system on account of the large amount of sailab frontage, in preference to the fixed system of assessment recommended by the Settlement Commissioner.

The proposal of the Financial Commissioner was accepted by Government in your No. 1343, dated 18th November 1876.

2. Mr. Lyall, with his No. 82C., dated 17th March, herewith forwarded, now sends the announcement report required by Section 31 of Act XXXIII. of 1871, and rule CIII., V. 5, under it for these two chaks.

His object in reporting the announcement of these two circles before the other assessments have been completed, and for announcing in anticipation of sanction to the

changes made, is, that the assessment may be introduced from the ensuing rabi, which is almost necessary for a fluctuating assessment of sailab lands.

3. A few modifications have been found necessary in the original proposals, which, as they were not originally recommended by the Settlement Commissioner, had not been so fully elaborated as they otherwise might have been. The Financial Commissioner considers that Mr. Lyall has not acted *ultrà vires* in allowing Mr. Roe to announce the jamas without obtaining previous sanction to these alterations, as the practice has been to make the announcements without further reference after the assessment reports have been sanctioned, and the instructions required by Section 32 of the Act are virtually given by the Financial Commissioner under orders of Government on the assessment reports, which, though prescribed in the Rules, Chapter CIII., V., 1 *et seq.*, are not required by the Act.

Extract of a letter No. 82C., *dated Camp Shujabad,* 17*th March* 1877, *from* J. B. LYALL, *Esquire, Settlement Commissioner, Mooltan and Derajat Divisions, to the Settlement Secretary to Financial Commissioner, Punjab.*

* * * * *

Jhallari lands included in the fluctuating assessment.

2. The only alterations we made were in respect to jhallars. Mr. Roe had at first proposed to give them, like the wells, a fixed assessment at an average rate of Rs. 20 per jhallar. We found it necessary to arrange that jhallar cultivation should be assessed annually like sailaba cultivation, and at the same rates. This involved no reduction of assessment on jhallars: it was merely an alteration of a detail in the method of assessment originally proposed by Mr. Roe.

Extract of a letter No. 640, *dated Lahore,* 7*th June* 1877, *from* C. L. TUPPER, *Esquire, Officiating Under-Secretary to Government, Punjab, to the Secretary to Financial Commissioner, Punjab.*

IN acknowledging the receipt of your letter No. 455S., dated 19th ultimo (the enclosures of which are herewith returned), I am desired to convey the expression of His Honor the Lieutenant-Governor's satisfaction at the promptitude with which the Settlement Commissioner and the

Settlement Officer of the Mooltan District have introduced the fluctuating system of assessment in the Bhet and Hittar circles of the Sarai Sidhu Tahsil. The Lieutenant-Governor is also glad to see that the fluctuating assessment for sailab land is popular.

ON THE SUBJECT OF "CHER" LABOR.

Extract of a letter No. 130, *dated Mooltan,* 30*th May* 1877, *from* J. B. LYALL, *Esquire, Settlement Commissioner, Mooltan and Derajat Divisions, to the Settlement Secretary to Financial Commissioner, Punjab.* (2)

7. In paragraph 12 of my former letter I said that but for the unsuitability of fixed jamas for long terms to the circumstances of the canal villages of Mooltan, I should vote for maintaining fixed assessments and the *cher* labor system for the present.

I am now inclined to think that I somewhat exaggerated that unsuitability, and that, with some slight alterations, the present system of assessments may be expected to work sufficiently well, provided that Canal Officers and Deputy Commissioners are alive to the necessity of watchful activity in regard to canal clearances and remissions or reductions in aggravated cases of failure of water-supply.

Supposing that Government decides to maintain the existing system of fixed assessments, the alterations in it that I would suggest are as follows :—

(1).—Mr. Morris divided the jama of each village into two items,—canal or remissible, and fixed land revenue. I would do the same, and also carry out this division (after the *bach*) in detail for every well or patti returned in measurements as canal-irrigated.

I would then make it the rule that if any such well or patti entirely failed in any year to get canal water its canal jama should be remitted as a matter of course. Rules should also be framed to guide the Deputy Commissioner in allowing discretionary remissions in aggravated or continuous cases of partial failure.

One reason why Mr. Morris's system of remissions was never carried out, was that it was too general: it insisted (*see* paragraphs 17 and 18 of his report) on treating each village, and in fact all the villages on a particular canal, as a whole; in bad years an estimate was to be made of the general proportion of failure of water-supply, and a general remission of such proportion of the canal jama was to be granted. This led to no remissions being allowed, for in point of fact the canals seldom or never fail generally or entirely; and a short supply in a canal often does no harm to low-lying lands or lands near the canal head, or jhallari lands, while it ruins high-lying lands or lands near the tail of a canal.

(2).—The annual measurements of area irrigated and crops grown with canal water, which are now made for the Canal Officer by muharrirs, should be made by the patwaris with detail for each well or patti. The Deputy Commissioner would then have statistics which would enable him to dispose properly of all applications or recommendations for remissions.

(3).—Hitherto, when canal irrigation has been extended to waste lands or lands formerly irrigated by wells only, the new well or patti has been brought on to the *cher* labor roster, but no canal rate or increase of assessment has been demanded. To meet the case of extensions of canal irrigation after this settlement, a light canal-advantage revenue rate should be fixed for each assessment circle, to be paid by all lands not assessed at the settlement *bach* as canal-irrigated, which may hereafter get canal water. Where certain wells or pattis are now known to have so uncertain a supply of canal water as to make it hard to assess them upon it, it might be advisable to leave the canal water out of account in their present assessment, and to provide that they shall pay the canal-advantage rate in the same way as the abovementioned lands when they get canal water.

8. With the above precautions and alteration of detail, I think that the present system of fixed assessment might be expected to work fairly; and, if so, I am on the whole against the introduction of water rates. Though they are, I think, in theory the right method of assessment, yet in practice their uniformity would, in spite of all precautions, make them press rather hardly upon inferior lands, and upon those classes to whom we are usually obliged to show some favor in assessments. Though this objection would not alone carry the day gainst the introduction of water rates, I think it does so when coupled with the facts that annual assessments would impose a very great increase of labor and responsibility on Government officials, and would expose the zamindars to much trouble and some exactions.

It is a fact, too, that the general feeling among the zamindars would be (as in the case of the water-advantage rate imposed in the Bari Doab) that a kind of new tax had been imposed on them.

Extract from the Revenue Rate Report on Tahsil Shujabad, Mooltan, by C. A. Roe, *Esquire, Settlement Officer.* (3)

* * * * * *

Proposed rates.

53. The general principle of assessment is the same in all, and is similar to that proposed for Mooltan. It is as follows :—

I.—In the Hittar chaks, sailab outside wells is to be assessed by annual measurements at a rate fixed for the term of settlement. But all land inside wells will have a fixed jama, and will be exempt from measurement.

II.—The present system of chers and a fixed assessment for the term of settlement is to be maintained for canal villages. But the jama thus fixed will be divided into two parts, canal and non-canal.

III.—The non-canal jama is the estimate of what the villages could fairly pay, if they took no canal water.

IV.—The canal jama is the estimate of what the village could pay on its average canal irrigation, in addition to the non-canal jama. Its chief basis is the estimate obtained from the crop rates given hereafter in detail for each chak, but of course the general condition of the village has also been taken into consideration.

V.—The canal jama, though fixed for the term of settlement, is open to remission in case of failure of canal water. It will be distributed over the different holdings in the same way as, but apart from, the non-canal jama, so that if a remission is granted there may be no doubt who is to receive the benefit of it. If there has been a complete failure of canal water, from whatever cause, in any holding assessed with a portion of the canal jama, the whole of the canal jama of the holding will be remitted as a matter of right. In case of partial failure, the remission will be left to the discretion of the Deputy Commissioner, who will be guided by the report of the Canal Officers, and will take into consideration the general condition and assessment of the holding, and the profits and losses of past years.

VI.—If any well or patti, not included in the *bach* of the new canal jama, takes canal water hereafter, it shall be charged an uniform rate of Re. 0-8-0 per acre on the cultivation receiving the water, as ascertained by annual measurements. But with the consent of the Canal Officer, the Deputy Commissioner may grant a fixed jama for such holding for the remainder of the term of settlement, if the proprietor wishes it.

These proposals differ somewhat from those made in my Mooltan Report; but, as pointed out in the Settlement Commissioner's review of that Report, I had then overlooked the proposals contained in some previous correspondence. It is in accordance with the latter that my present proposals are now made.

[The system of fluctuating assessments as set forth above has been introduced into all the tahsils of the Mooltan District.—H. C. F.]

EXTRACT No. VI.

ASSESSMENT OF RIVER-SIDE VILLAGES IN MUZAFFARGARH.

[A similar system to that in Mooltan was introduced into Muzaffargarh also, the details of which will be gathered from the following extracts taken from the Report on the Sinawan Tahsil. The system was extended to all the three tahsils of the district, but it differs somewhat in each as regards the extent of area to which it is applied.—H. C. F.]

Extract of a letter No. 144, dated Mooltan, 11th June 1877, from J. B. LYALL, *Esquire, Settlement Commissioner, Mooltan and Derajat Divisions, to the Settlement Secretary to Financial Commissioner, Punjab, forwarding the Revenue Rate Report of the Sinawan Tahsil, Muzaffargarh.*

* * * * * *

System of assessment and revenue rates proposed for the Bet Circle.

THE Bet Circle comes first. After making every allowance for incomplete measurements at last settlement, and after allowing for the 4,858 acres of cultivation belonging to villages which have come across from Dera Ghazi Khan, it is evident that there has been a large increase in area of cultivation and in number of wells in this circle since last settlement. The revenue also appears to have increased largely, not only by the addition of the jamas of the villages from Dera Ghazi Khan, but also by the annual assessments of new cultivation in the Zer Sadma villages. These villages, by the bye, include (*see* paragraph 78) a good deal nearer a half than a third of the area of the Bet Circle, and a very complicated system of annual assessment prevails in them, every kind of change for the better or worse being taken into account annually. Mr. O'Brien proposes to bring the whole circle under the fluctuating system of assessment which has been sanctioned for the nasheb villages of the adjoining district of Dera Ismail Khan. I concur in this, but I think that the rate on sailaba land should be 13 annas instead of 12 annas. This, with the proposed fixed abiana of Rs. 8 per well on 502 chahi sailaba wells, would give a jama of Rs. 29,293. With regard to the remaining area of the chak, *viz.*, the Chahi Nahri, the Nahri Paggu and Jhallari, and the Chahi Khalis, I think the rates proposed for a fixed assessment of the circle (*see* paragraph 86) should be sanctioned.

This would make the total revenue rates jama of the circle Rs. 32,742, I think that these canal lands should, if possible, get a fixed assessment; but, if this is found not to be advisable, then their annual assessment under the fluctuating system should, in my opinion, be at the special rates proposed for them, and not at the rates proposed for sailaba lands. This is supposing that they continue to get canal water.

Result of proposed rates for Bet Circle. My reasons for raising Mr. O'Brien's sailaba rate.

7. The present jama of the circle is Rs. 30,344; but of this, for the last three or four years (since kharif cultivation has become impossible owing to the effects of the floods and the embankment) some Rs. 5,600 per annum on an average have had to be remitted. The assessment I propose of Rs. 32,742 is therefore about 32 per cent. in excess of the average revenue at present collected.

My reasons for recommending a sailaba rate of 13 annas instead of 12 annas, as proposed by Mr. O'Brien, are briefly as follows:—In the nasheb of Leiah, which adjoins this circle on the Indus, the average sailaba rate proposed was 12 annas 6 pies; and but for the fact that this rate gave a very large increase, we should have not proposed a lower rate than 14 annas

In Sangar and Dera Ghazi Khan, on the opposite side of the Indus, the sailaba rates adopted were 12 annas and 13 annas 6 pies. The Sangar rate would have been put higher if the rate of 12 annas had not given a large percentage of increase.

In Upper Sind, where a system of fluctuating assessment of sailaba lands prevails, the rate is as high as Rs. 2 per acre; as high a rate as this is now paid by sailaba lands in some fully-assessed villages in Mooltan. There is no doubt, in fact, that 14 annas is a fair and moderate rate for ordinary sailaba lands, and Mr. O'Brien himself proposes it as the rate for a fixed assessment. He does not, I think, say enough to justify our reducing the rate to 12 annas for the fluctuating assessment. I have recommended a rate of 13 annas instead of 14 annas, because the villages in the north of the circle and along the embankment in particular certainly require a specially light assessment; their lands have been weakened by heavy floods and by standing water; they get

a single crop where they used to get two; their cattle and other property have been swept away or injured by the floods. For these particular villages 11 annas or 12 annas will not be too low a rate; but the rest can, in my opinion, easily pay 14 annas or 15 annas.

Extract of a letter No. 646, dated Lahore, 22nd May 1878, from J. G. CORDERY, *Esquire, Officiating Secretary to Government, Punjab, to the Secretary to Financial Commissioner, Punjab, in reply to Financial Commissioner's No. 286, of 16th March 1878, forwarding the Sinawan Assessment Report.*

* * * * * * *

3. Secondly, it is recommended to introduce in the Bet Circle a fluctuating system of assessment, resembling that sanctioned for the river tracts in Dera Ismail Khan, and, to some extent also, the method adopted in the Serai Sidhu Tahsil of the Mooltan District. The Settlement Officer has drawn up proposals for either a fixed or a fluctuating jama; but all opinions are unanimous in favour of the latter system, and in September last it was provisionally sanctioned by the Financial Commissioner in the northern part of the tract. To the introduction of the system in this circle the Lieutenant-Governor agrees. In regard to the details, there were some slight differences of opinion between the Settlement Commissioner and Mr. O'Brien which it has become unnecessary to discuss, as it appears from the correspondence forwarded with your letter No. 512 S., dated 2nd instant, that both officers are now agreed as to the course which is most suitable. Previous to the receipt of this letter His Honor was prepared to sanction Mr. Lyall's recommendations for a 13 annas rate on sailaba proper, and a fixed charge of Rs. 8 per well, both as being supported by the Financial Commissioner and as yielding the higher revenue, which there seemed good reasons to believe could be paid. But, from the information given in Mr. O'Brien's letter No. 353, dated 30th March last, the Lieutenant-Governor is assured that the modifications proposed subsequently to the submission of the assessment papers are necessary. The system will, therefore, stand as described in Mr. Lyall's letter No. 94, replying to your communication No. 1383, dated 8th March: that is to say, the well rate will be extended so as to apply to jhallars and pakka and kacha wells, and will be remitted not only when the well or jhallar is destroyed, but also when it is

disused. New jhallars and new kacha wells will be assessed at once at half the lump-sum assessment, and after the first year at the full rate ; and new pakka wells will get protective pattahs for 20 years, as proposed. As regards the very small proportion of canal land in this circle, it can be assessed as suggested by the Settlement Commissioner in reviewing the assessment report.

* * * * * * * *

IV.—The fourth question is, what part of the revenue of canal-irrigated lands should be treated as remissible in case of the failure of canal water ? It is observed from the 11th paragraph of the Settlement Commissioner's report, that his suggested modifications in the present system of fixed canal assessments were fully detailed in a letter which he submitted with special reference to the Mooltan District on the 30th May last. The Financial Commissioner has thus asked for sanction to the proposals made for Muzaffargarh before submitting those apparently stated in more general terms for the Mooltan District. Under these circumstances the Lieutenant-Governor prefers to leave this question open until he has seen Mr. Lyall's report regarding Mooltan. It does not appear to him necessary to decide the matter before announcing the assessments ; and although the course proposed in the present instance is possibly unobjectionable, and resembles to some extent the system in the Montgomery District, His Honor would still prefer to await the Mooltan reference before finally deciding. The people may, however, be assured of liberal treatment.

EXTRACT No. VII.

RIVER-SIDE LANDS IN JHANG.

[The following extracts are taken from the correspondence on the Chiniot Assessment Report. It was not proposed to adopt a system of fluctuating assessments in that tahsil; but the *pros* and *cons* of the question were fully discussed before this decision was arrived at and the correspondence is therefore included in the present selection.—H. C. F.]

Extract of a letter No. 3096, dated Lahore, 28th April 1879, from F. C. CHANNING, *Esquire, Settlement Secretary to Financial Commissioner, Punjab, to the Settlement Commissioner, Mooltan and Derajat Divisions being the Review of the revenue rate report of the Chiniot Tahsil, Jhang.*

* * * * * * *

(I) 19. The Settlement Officer discusses at some length the advisability of a fluctuating system of assessment for *sailab* lands in this tahsil.

Fluctuating system of assessment not proposed.

He finally decided not to recommend it, for the following reasons :—

1. The recorded *sailab* lands are usually flooded.
2. If not flooded, percolation and rain-fall generally enable a crop to be produced.
3. The Chenab is not capricious in its action.
4. The *sailab* lands rarely form an extensive part of the village area.
5. The zamindars are opposed to the introduction of the system.

As Mr. Lyall explained in his review as Settlement Commissioner, he thinks these reasons are sufficient.

Extract of a letter No. 60., dated Camp Mianwali, 1st February 1878, from J. B. LYALL, *Esquire, Settlement Commissioner, Mooltan and Derajat Divisions, to Offg. Settlement Secretary to Financial Commissioner, Punjab.*

* * * * *

Reasons for thinking fluctuating assessment of *sailaba* lands unnecessary in this tahsil.

3. In paragraph 16 Mr. Steedman gives his reasons for thinking it not necessary to have annual assessments of *sailaba* lands in the river circles of this tahsil. I have marched through most of the country, last year with Mr. Fryer through one part, and quite lately with Mr. Steedman through another, and have on both occasions had this question in view. The Chenab is here confined within well marked limits; it is not violent like the Indus or Sutlej, nor so capricious in change of channel as the Ravi: the *sailaba* lands form a narrow fringe along the banks of the river; at a short distance back all the cultivation is protected by wells. The *sailaba* land therefore is almost all low enough and near enough to be moistened by percolation from the river, even in years when it is not actually flooded; and with this percolation and the rain-fall, which is considerable, it may be considered to be fairly secure of a crop. For these and other reasons given by Mr. Steedman, I agree in thinking annual assessments of *sailaba* lands not necessary in this tahsil; and, unless assured that a change of system was necessary, I would not recommend it against the wishes of the zamindars.

Extract from the Chiniot Assessment Report, Jhang District, Revised Settlement of 1878, *by* E. B. STEEDMAN, *Settlement Officer.*

* * * * *

Should the system of annual measurements and assessments be introduced? Reasons for and against.

16. Here I must digress to discuss the question whether the Chenab *sailab* lands should be brought under a system of annual assessment and measurement similar to that which has been sanctioned for the alluvial tracts on the Indus and the lower Chenab. Looking at the question without the least bias or any prepossession in favor of the old system, I may say that the arguments on either side are very equally balanced. At the present moment the floods have failed, and the *sailaba* lands are for

the most part lying uncultivated. During my last tour in Chiniot I argued with all the zamindars of river villages in favor of the annual measurements. I pointed out that where all the culturable lands subject to inundation in any village had been cultivated, that the proprietors must gain by the system, and that it could only pay them to retain the old system where they had kept back a large quantity of culturable waste for cultivation after the completion of the settlement. The one unvarying answer I got was that they could not endure a yearly measurement; that the trouble, expense and inconvenience they would have to submit to would be endless; that the alluvion and diluvion measurements were bad enough, and any further extension of the system would be hated. I told some of the villagers owning large quantities of *sailab* what the assessment I proposed was, and asked if they would prefer to pay it or have annual measurements. Without a single dissent they elected to pay a fixed jama. Apart from the dislike evinced by the zamindars, I think there are many reasons why the system should not be introduced in this tahsil. First of all, the conditions of the case are quite different from those in the districts on the Indus and the Ravi. There whole villages are entirely dependent on the river floods for their annual crops. At one time a tract of hitherto rich and fertile country is transferred into a barren waste by the failure of the inundations, and at another a tract that has perhaps for years lain sterile and bare is flooded and at once brought into cultivation. In Chiniot the river is confined within well-marked limits. It commits no vagaries like the Ravi. There are only two points at which in high floods it overflows what is called the Utar. A still more material point is, that there are only two villages that can be said to be entirely dependent on the river for their crops. But both of these are fairly well off even in a year so remarkable as the present for failure of *sailab*. Where the lands were not flooded, the percolation of water from the river had rendered the soil moist enough for being ploughed and sown for the *rabi*, and the *kharif* has also been good. Many villages do possess large quantities of *sailab*, but they also possess wells, and as a rule the owners of the wells and the owners of the *sailab* are the same persons. In most of the villages belonging to the Gilotars, and in others also, the produce is shared and the jama paid according to shares, not according to possession. Of course a failure of the *sailab* crops would press very heavily for the

time on the proprietors, but calamities of season will happen, and the well crops would enable them to bear up against the calamity more successfully than if they were entirely dependent on the crop that had failed.

Again, the rain-fall in Chiniot is about double the rain-fall in the Dera Ismail Khan, Muzaffargarh and Mooltan districts. If there had been good average rain during the present year, even with the failure of inundation the greater portion of the *sailab* would have borne a *kharif* if not a *rabi* harvest. As it is, there was good rain during the first week of September in many villages, and in these a large portion of the *sailab* lands have been sown with wheat. It is intended to prepare a return of the *sailab* lands of each village under cultivation during the *kharif* and *rabi* of 1877-78. I also propose to revisit the Chiniot tahsil again in the spring of next year, and I shall then be in a better position to judge whether annual assessments and measurements are absolutely necessary to guard against future failures of *sailab*. The extent of the present failure is quite unprecedented. Never before has the river been known to rise so little during the rainy season.

Continued.

The reasons for the adoption of annual assessments have been discussed so fully and so often that it is unnecessary to recapitulate them here. I am thoroughly aware of the advantages of so elastic a revenue system and of the extent to which it simplifies the work of assessment; yet I certainly hesitate to recommend its introduction, the circumstances of the case being as they are in the face of the determined opposition of the people. We should give them some little credit for knowing what is to their interest and what is not. The Government is not, I take it, desirous of forcing the system on the people from pecuniary grounds. It was found that in certain districts the cultivation in riverain tracts varied so much from year to year, both in the gross amount and in the locality, owing to the changeable action of the river, that some villages were ruined and others were unduly benefited. The remedy proposed and sanctioned was a system of annual assessment. Now, let us look back on the fiscal history of this tahsil. Mr. Monckton says of the settlement of Mr. Cocks, that it broke down "owing partly to the recession of the river from the Chiniot to the Shahpur side,

leaving dry the *'sailaba* lands." I made enquiries while lately in the tahsil, and I could get no confirmation of the recession having taken place. Mr. Monckton must have had some one or two individual villages in his mind I fancy when he wrote; he could hardly have meant that the river had gone bodily over to the Shahpur side. Any observer of the alluvion and diluvion changes by the Chenab and other Punjab rivers must have noticed how the main current of the river alternately flows from side to side. Where it impinges on the bank a considerable amount of decretion takes place and the stream seems to rebound and be diverted on to the opposite side, where the same process again takes place. Another point too is this, that the *sailab* cultivation at the time of Mr. Cocks' settlement was very small, only 2,089 acres on the Jhang side of the Chenab, not quite 12 per cent. of the total area assessed. Referring to the statistics of the second summary settlement, Mr. Monckton says the cultivation has decreased to 1,072 acres *sailaba*. The falling out of cultivation of 1,017 acres of *sailaba* lands was probably not entirely due to a change in the course of the river; for we find that the well cultivation also had decreased by about 5,000 acres or one-third, this decrease being due to causes other than a change in the river, which I have no doubt also influenced the decrease in the *sailaba* cultivation.

Continued.

As far as I can judge, I am inclined to think that failure of *sailab* is unusual. Villages suffer by having their *sailab* lands decreted, but the cases are few where the *sailab* cultivation is precarious and uncertain. No assistance is to be derived from the papers of last settlement as compared with the present. At last settlement there were 1,486 acres of *sailab* cultivation, and now there are 6,546 acres in the Daryai Circle. No village has suffered from its *sailaba* lands being left dry by a change in the course of the river. In fact there are only two villages recorded as possessing any considerable quantity of *sailaba* cultivation, and their areas were 260 acres and 253 acres. The increase in *sailaba* cultivation, upon which an assessment will now be imposed, no doubt is accompanied by an increase in the risk of villages being put to great straits from failure of inundation; and this is an additional argument in favour of the system of fluctuating assessments, but it does not prove the

necessity for its introduction. My own opinion at present is that the system should not be introduced into the Chiniot Tahsil. Should I be induced to change my present views after an inspection of the *sailab* lands next spring, and a comparison of the *sailab* area assessed and the area under cultivation during the present year, I propose to submit a report on this particular question. As it is, my rates have been framed on the hypothesis that the assessment would be fixed and not fluctuating.

Extract of a letter No. 845, dated Lahore, 14th July 1879, from LEPEL GRIFFIN, *Esquire, Secretary to Government, Punjab, to the Secretary to Financial Commissioner, Punjab.*

* * * * * * *

3. The most noteworthy point is that a fixed assessment has been proposed for sailab in the Hetar and Daryai circles, whereas in all the recent settlements in the south-west of the Punjab a system of fluctuating assessment has been introduced for this description of land. The Lieutenant-Governor considers that the recommendations of the Settlement Officer are supported by good arguments; the alternative system involves considerable interference in village affairs, and the main reason for its introduction in other parts has been the uncertainty of the sailab area. In the present case, however, there is no such uncertainty, the floods are more regular and the action of the Chenab is here less capricious than that of other rivers, while the condition of these circles has improved under a fixed assessment, and the people are averse to change.

I am to remark that though fluctuating assessments were at first unpopular elsewhere, yet the zamindars in the Mooltan District have now become favorable to the new system, while in Mianwali they sought for it, and in Dera Ismail Khan the only class that objected were the wealthy and large proprietor, to whose interests it was naturally opposed.

His Honor, however, is of opinion that no change is needed here, and he approves of the fixed assessment proposed for the sailab lands of this tahsil.

[In certain tracts of the Shorkot and Jhang tahsils a fluctuating revenue was proposed, not only for the river-side circles, but also for the wells of the high Bar lands. This was a new step formed in the direction of fluctuating assessments; the proposals, which have been generally accepted by the Lieutenant-Governor, will be gathered from the following extracts.—H. C. F.]

Extract from the Assessment Report of Tahsil Shorkot, District Jhang.

THE BAR AND KACHI CIRCLES.

* * * * * * * *

96. For both of these circles I have to recommend a fluctuating assessment on the wells, and it will be more convenient to describe in detail the system proposed and the reasons for its introduction before going into the assessment rates themselves.

Fluctuating assessments proposed for Bar and Kachi circles.

* * * * * * * *

102. The system I propose is as follows: a jama for each village will be announced in the ordinary way. This jama will be in the first place calculated on the assets, *viz.*, the number of wells in work and the area under cultivation recorded at measurements, but in the case of each village reduction or enhancement will take place according as the number of wells is found to have decreased or increased at the time the jamas are announced. The village jama announced will be distributed by 'bach' over the wells in cultivation. The jama assessed on each well will be paid by the proprietors thereof so long as the well continues to work. One portion of the jama will form the kharif instalment, and one portion that for the rabi. If the well falls out of work a remission will be at once given dating from the harvest after the well ceased working. For example, if a rabi crop was raised and gathered, and the well fell out of cultivation immediately after, before the kharif crop was sown, then the rabi instalment will be collected and the remission commence with the kharif instalment. *There will be no measurments of the crop area year by year.* If there is a crop of any description, however poor it may be, the well owner will be liable for the full instalment of the harvest at which that crop is reaped. Though this system may cause some little loss in bad seasons,

The proposed system of fluctuating assessments.

still the proprietor will in good seasons gain largely, for my assessments are exceedingly moderate. Without annual measurements some inequalities must exist, and I would sooner propose a fixed cash assessment than recommend annual measurements for the scattered wells of this circle. Temporary remissions can be given for crops that have been injured by hail, locusts, blight, or any other cause; but they should not be given freely, as my assessment is quite low enough to protect the well owner from ordinary calamities of season. When a well assessed at this settlement subsequently falls out of work, and is afterwards again brought into cultivation, the jama assessed on the well at the original 'bach' will be at once reimposed. No grace will be allowed, and the demand will recommence with the instalment of that harvest the crops of which are first cultivated. What I have written above disposes of wells assessed at settlement. Next comes the question of how to assess wells subsequently brought into cultivation, whether they are new wells or only old wells repaired. New wells, I propose, should be allowed to remain revenue free for three years, after which they will come under assessment. For old wells repaired I think one year's grace will be ample. There are great numbers of old wells that hardly need any repair beyond putting up the wood work, and to allow these to remain revenue free for more than one year seems to me quite unnecessary. At the same time I do not think that three years is too long a period of grace to grant to new wells. There is a considerable amount of expense incurred in the construction of the well, in levelling the land, and breaking up the bushes and jungle. If three years is considered too favourable, I would suggest a period of two years reckoned from the first harvest grown on the well. All new wells in any given village after the expiry of the period of grace will pay at a uniform well rate to be fixed by the Settlement Officer and to be announced by him with the other jama. This well rate would generally be about one-fifth lower than the average incidence per well of the announced village jama. For instance, if a jama of Rs. 140 is announced for a village containing seven wells, the incidence of that jama will be Rs. 20 per well, and my well rate for new wells would be pitched at about Rs. 16. Of course variations will occur, and I may as well note two cases. First, if the village has been paying hitherto a full jama considerably in excess of my rates without inconvenience, I should not assess the existing wells below that jama; but I would

not proportionally increase my well rate on new wells. For instance, the incidence of the present jama is Rs. 25 per well, which is high; but it has been paid hitherto without any hardship. I would retain the present jama, but fix a well rate for new wells lower than Rs. 20. Conversely, where the resources of a village have, say, doubled, the original rate per well being moderate, I should probably not double the jama at once, though my rates would justify such a course. I should take a lower jama on existing wells, but I should not therefore lower my rate on new wells. For instance, the wells of a village assessed at last settlement at Rs. 170 have increased from 10 to 20; my rates would give me Rs. 340, but I should assess at about Rs. 300. This would give an incidence of Rs. 15 per well, and I should very probably retain so low rate as this as my well rate on new wells. The assessment on a new well will be remitted at once on its falling out of cultivatin, oand at once re-imposed when again put to work.

Administration of the system, No extra establishment required.

103. To carry out this revenue system no increase of establishment will be needed. There will be no measurements and no additional work beyond the preparation at each harvest of a list of wells then at work, for each village, and memoranda as to whether any of these wells are not liable to assessment, and why. The lambardars would give the requisite information, and failure to do so or giving false information could at once be followed by dismissal from office. There are 44 villages in the Kachi and 17 in the Bar with a total of 1,345 wells. To supervise the patwaris's returns of wells in so few villages would not take very long, and now that tahsildars have been relieved of so much judicial work they will have abundant leisure for revenue matters. As the staples are wheat and barley for the rabi, and cotton and jowar for the kharif, there will be no difficulty in deciding from what harvest the well commences to be at work. The lists of wells or kistbandis could be filed on the 1st May and the 1st November, or, if necessary, a month earlier.

Comparison between the system proposed and the well assessments of Sawan Mull.

104. It will be at once recognised by you that the system I now advocate is no new-fangled invention. These very wells were assessed by Sawan Mull in a very similar manner. Under his revenue administration each well

obtained a lease at a rent of Rs. 12, which protected 25 bigas of cultivation; but if more land than the protected area was brought under cultivation, it became liable to an additional assessment. The zamindars are always praising this system "*Sath panch barah*" (seven rupees at the rabi, five at the kharif, Rs. 12 in all), as it is invariably termed. Besides this amount there were some cesses that brought up the well jama to Rs. 15 or Rs. 16. This amount was only paid when the well was at work. It was at once remitted when cultivation ceased. All new wells were liable to immediate assessment. There is but a very slight difference between the system of Sawan Mull and that now recommended. His was a fixed minimum well jama for all wells increasing in the case of good wells with an increase of cultivation beyond a fixed area. My well rate is differentiated according to the resources and assets of the various villages, but once imposed is not susceptible of enhancement. At the first settlement Mr. Monckton himself saw the necessity of assessing the upland wells on some fluctuating system. Mr. Cust, in his review of the Jhang Settlement Report, paragraph 22, wrote: "In this district wells have been sunk with a convenient arrondissement of land by different families, aggregated in mahals, and Mr. Monckton and Colonel Hamilton deprecate the introduction of the village system and bugbear of joint responsibility." Mr. Cust then quotes a letter from Mr. Edmonstone, of which a few extracts must be given:—"On the one hand, it seems absolutely impracticable to recognise each well as a separate and independent mahal and to realise revenue from each, as Mr. Monckton suggests, by rates annually assessed according to the nature of the crops; for if there were no other objection to it, the mere fact that no District Officer without an immense increase to his mofussil establishments and a large additional expense would have time to supervise the working of such a system, would render it impracticable." In the same letter Mr. Edmonstone admitted that joint responsibility "seems to be an anomaly if not an absolute injustice;" but he was extremely unwilling to allow any departure from the established revenue system. Mr. Cust wrote in his summing up paragraph 25: "I admit that all these peculiarities point very distinctly to the necessity of a light assessment and to periodical revisions of the record of rights, but nothing more. We cannot consent to

See also Major Hamilton's Revenue Report 1851-52; and Mr. Monckton's Revenue Report for 1852-53, paragraphs 3—6.

collect a separate demand from several thousand wells and let loose a swarm of revenue subordinates on the district." It rather seems that in the heat of the argument in the case "individual wells as separate mahals *versus* joint responsibility" the minor question of fluctuating assessments was somewhat slurred over. Mr. Monckton's proposal too rested on the basis of annual measurements, and a differentiated rate on crops, which seem to have wrecked the project. My system in effect will abolish the principle of joint responsibility, though in name and in law it will remain. This may be a result, but it will not be, I think, an objection. I would also call your attention to paragraph 9 of your revie w of Mr. Purser's Report on the Montgomery Settlement.

Objections to a fixed cash assessment.

105. I have already noted the causes which render agriculture in these two tracts so precarious and result in such ups and downs in the condition of individual zamindars, and of whole villages. Under a fixed cash demand the inequalities that arise are of two kinds: the first in the assets of one village as compared with that of others, the second in the assessments paid by different wells in the same village. When the assessment is fixed, there is always a great disinclination on the part of the revenue authorities of the district to recommend remissions. Violent changes occur in the resources of a village and in its ability to pay the assessment, while not the least variation takes place in the demand. It often happens too that the assets of a village do not diminish but even increase, while the internal distribution of the jama by reason of old assessed wells falling out of cultivation and the construction of new wells that are not assessed has become most unequal and most unfair. The remedy of course is a fresh 'bach,' but this has hardly ever been applied. What does actually happen is exactly what you have described in the paragraph of your review on the Montgomery Report before referred to:—"The fact is that it is very seldom that either of these measures (transfer or lease of the defaulter's well), are feasible in the case of wells in the Thal or Bar tracts. The other well owners are either unable or unwilling to work a second well, and no tenants are available. The well, therefore, lies waste till the owner returns, which may not be for years, if ever. As to the revenue, what really happens is that the lambardar year after year follows the defaulter to the river-side village where he is

cultivating as a tenant, or the place where he is grazing his cattle, and exacts from him the revenue of the deserted well. When he absconds to a distance or is reduced to utter beggary then the lambardar almost always has to pay up the balance himself. The other well owners are still ignorant of our rules on the subject, and strongly repudiate responsibility." I have nothing to add to this except that the greater number of proprietors in the Kachi are Belochis who mostly have relations along the Indus and who do not hesitate to migrate there in bad seasons, leaving the lambardar to pay up as best he can the revenue due from them. It is a curious fact that the lambardars should never have resorted to the 'bach.' If a lambardar represented that a portion of the revenue was year by year irrecoverable, that he had hitherto paid this out of his own pocket, but that he now wished the theory of joint responsibility to be enforced and a new 'bach' carried out, as far as I understand the Revenue Code the application must have been sanctioned. As a matter of fact I do not think a single new 'bach' has been effected in any of these villages since the last settlement *by order*. Here and there, where old wells have fallen out of work and a number of new wells constructed, the assessment of the old has been 'bached' by private arrangement in the new. These cases are few, and the 'bach' is always very imperfect and unequal.

* * * * * * *

Orders of the Financial Commissioner contained in his No. 22-545, dated 8th April 1878. Probable results.

108. It was in reference to these remissions that the Financial Commissioner has lately passed a stringent order directing that in all cases of distress remissions are to be at once recommended, and that where the demand has become unequally distributed in the particular village a fresh 'bach' is to be at once carried out. The effect of this order will be that applications for remissions will be sent in very much more frequently than has been the case hitherto. It must be carefully borne in mind that a fixed assessment, however light in these two circles, will not prevent individuals or villages from being ruined by bad seasons and desertion of tenants, and that though these evils may be to some extent remedied by remissions of a temporary or permanent character, yet that the Government will never be able to recoup itself for remissions given in one village by enhancing the revenue of another. Even with the late orders of the Financial Commissioner, I fancy relief

will be given tardily under a fixed system of assessment. Remissions will not be given at once when wells fall out of work, and the payment of two years' revenue on lands that have fallen out of cultivation will certainly do much to impoverish the proprietor before relief is given. On the other hand, I claim for the proposed system the virtue of relieving, in fact preventing distress, so far as the revenue is concerned. In seasons of drought, when wells are deserted and fall out of work, the relief is instantaneous. There is no tardy investigation, no attendance at the tahsil. The list of wells in work is prepared, and on them only is the revenue collected. If, when wells fall out of cultivation in any village, remissions are to be at once given, or if new wells have been constructed a new 'bach' is to be at once effected, it is not improbable that the following evil may arise. The tenants, or even the proprietors of a village where the soil is poor, might find it to their interest to throw their own assessed wells out of cultivation and migrate to new unassessed wells in a village where agriculture was carried under more favourable conditions. Proprietors might desert their wells in one village and get remissions on them, and yet bring into cultivation a large number of wells in another village. Migrations of proprietors would not be common, but there is nothing to prevent tenants from shifting from one village to another as it suits their interests. Instances in support of this possibility are not wanting. At the first settlement Uch had 45 wells at work, and now there are 28; while in the two adjoining villages of Dargahi Shah and Lishari the number of wells has increased from 21 to 45 and from 41 to 68. Darigondal and Gadara are similar instances. There are probably not a few of the old Uch tenants-at-will now cultivating in the two adjoining villages.

Answers to sundry possible objections to the system.

109. The above is the case for the fluctuating system of assessment. I next propose to meet a few of the objections that may be raised against it. The first is the objection that by taxing new wells the extension of cultivation will be checked. The answer is that when a similar system was in force under Sawan Mull cultivation did not decrease but increased. The introduction of the system is wished for by the zamindars, and will be heartily welcomed by them. It may be assumed that the people are quite alive to their own interests in such a case and are well aware which system will suit them best.

Another objection to fluctuating assessments is that they entail an additional establishment and an increase of expenditure. This does not apply to the system advocated, as under it there will be no measurements. A possible objection is that a system taxing all new wells in any village at one fixed rate, without respect to quality of soil or area under crop, is unequal in its effect. It is so undoubtedly, but in a very minor degree. Perfect equality of demand is never even attained by annual measurements of the area and differentiated rates upon crops. Crops are better in one village than another, in one portion of the same village than in another. I do not think this imperfection, which exists in all of our systems of assessment, should be allowed to have much weight. It has also been partly obviated by my plan of having high rates in the better, and low in the inferior villages. I admit it is quite possible that the construction of inferior new wells that could have been cultivated at some small profit if unassessed will be prohibited by my assessment of new cultivation. At the same time I think this is no evil. It is better that such wells should not be constructed.

One thing will have to be guarded against, and that is the possibility of a man finding it profitable to sink a new well, cultivate it revenue free for three years, then abandon it and sink a second, with which the process is repeated. In my opinion a period of three years grace will not be sufficient for such devices, and there are but few men who have the land on which to make such experiments.

Extract from the Assessment Report of Tahsil Jhang, District Jhang.

THE BAR CIRCLE.

* * * * * * *

A fluctuating system of assessment proposed.

46. In the adjoining circle of the Shorkot Tahsil I have recommended that a fluctuating system of assessment should be introduced, and I now have to recommend that the system proposed for the Shorkot Bar Circle should be adopted in this circle also. My proposals will be found in paras. 97, 98, and 102 to 109 of the Shorkot Report. An elastic assessment is less needed in this circle generally than in the Shorkot Circle, but I am

convinced that it will be by far the wisest plan not to have a fixed assessment. Cultivation is very fluctuating, and the tenants are an unsettled lot of men ready to flit away to the Ravi side on very slight provocation. Many villages wish for the introduction of the system, and others do not. If my proposals are sanctioned for Shorkot, I submit that they should be sanctioned for this circle, which so closely resembles the Shorkot Bar Circle.

THE KACHI CIRCLE.

* * * * * * *

Conditions of agriculture. A fluctuating system of assessment proposed.

115. The conditions of agriculture in this circle are similar to, but all in all slightly more favourable than those obtaining in the Shorkot Kachi. There is the same sterility, sourness of soil, fluctuation in cultivation, migratory character of tenants, and prevalence of takkavi advances in the villages adjoining the Thal, but the villages adjoining the Hethar are much better off: the soil improves and is less sour; a little grass is produced and some sar. In several villages there are at the present moment fewer wells at work than there were when the measurements took place. Cultivation is liable to much the same fluctuation as in the Shorkot Kachi, and I propose that the system of fluctuating assessments proposed in paras. 101-109, Shorkot Assessment Report, should be sanctioned for this circle if it is sanctioned for the Shorkot Kachi. If you approve, I would also suggest that for the six northern villages above Lohabhir it should be left optional to the zamindars to choose between a fixed and a fluctuating assessment. There is no necessity for giving a fluctuating assessment to these villages as, though situate close under the Thal, they are still near to the river and do not resemble in point of soil or in general agricultural character the pure Kachi villages. Some of the southern villages adjoining the Hethar do not wish for a fluctuating assessment, though at the same time they do not object very strongly to its introduction. I think these should not be allowed to choose; but I mention the fact in order to elicit your opinion and those of the higher authorities. They immediately adjoin the Kachi Circle of Shorkot where no option has been allowed, and the whole

tract should, as far as it is possible and expedient, be assessed on one and the same principle. The northern villages are detached from the main block, and in their case the above argument does not apply.

Extract of a letter No. 304; dated Kasauli, 22nd July 1879, forwarding the assessment reports of the Shorkot and Jhang tahsils, Jhang District, from Major E. G. WACE, *Settlement Commissioner, Punjab, to Settlement Secretary to Financial Commissioner, Punjab.*

FLUCTUATING ASSESSMENTS.

* * * * * * *

Fluctuating system in tracts cultivated entirely from wells.

Jhang Report, paragraph 115; Shorkot Report, paragraphs 96 to 109, and paragraph 136.

47. In the Shorkot Report the Settlement Officer has given an excellent description of the injurious tendencies of our fixed village assessments in tracts where the cultivation is entirely dependent on wells, and where, owing to the cost of the wells, uncertainties of season, and consequent frequent loss of well cattle, the wells frequently break down even under the lightest assessment. I shall add nothing to his remarks on this subject; I entirely concur with him, and recommend that the remedy which he proposes be accepted, *viz.*, that in such tracts the assessment shall fluctuate with the number of wells actually at work. His proposals are given in paragraph 102 of his Shorkot Report, and I would accept them as they stand without any alteration.

Tracts to which this should be applied.

48. The Settlement Officer in his reports proposes to apply this system absolutely to the Kachi and Bar tracts of the Shorkot Tahsil, and to the Kachi tract of the Jhang Tahsil, its six northernmost villages excepted. In these and in the Wasat Shorkot tract he would allow the zamindars the option of adopting the system or not. I have discussed these proposals with the Settlement Officer, and with his concurrence recommend that in addition to the above the system be applied absolutely to the Bar Circle of the Jhang Tahsil and optionally in Wasat Chenab and Utar Wichand circles of Tahsil Jhang.

In the circles where the fluctuating system is optional, a village which elects for it must be held to it for the term of settlement. But I would allow villages, who decline the system now, to adopt it at any subsequent time.

If the Settlement Officer, with the consent of the zamindars, also desires to apply the system to any of the villages of the Wasat Jhelum Circle in Tahsil Jhang, I think he should be allowed to do so. I believe that it is the only system that is really suited to tracts with a scanty rain-fall where the cultivation depends entirely on wells, and that as soon as it is understood it will be extremely popular, and will save both the people and Government from much loss.

Extract of a letter No. 167*S. C., dated* 1*st October* 1879, *from* F. C. CHANNING, *Esquire, Settlement Secretary to Financial Commissioner, Punjab, to Major* E. G. WACE, *Settlement Commissioner, Punjab.*

* * * * * * *

Kachi Circle, Tahsil Shorkot.

18. For this circle Mr. Steedman proposes a fluctuating well rate of Rs. 17 per well; the revenue-rate jama proposed by him is Rs. 15,723, and his estimate of the detailed village assessments amounts to Rs. 15,759; the present jama is Rs. 15,079. You do not suggest any alterations of the Settlement Officer's proposals. Looking to the wretched character of the country, Mr. Steedman's description of which Mr. Lyall can confirm from his own observation, the poverty of the proprietors, who do not own land elsewhere, and the unsatisfactory working of the expiring settlement, the Financial Commissioner thinks that no increase was to be expected or should be taken; and from comparison with other tracts in Dera Ismail Khan and Muzaffargarh, Rs. 17 per well seems to him a high rate for this Shorkot Kachi. He would put the well rate at Rs. 16, which will make the rate jama Rs. 14,799, or Rs. 120 above the last Settlement jama. Mr. Steedman is, Mr. Lyall thinks, wrong in comparing this circle with the chahi sailab of Muzaffargarh: there is some bad land like the Shorkot Kachi in that circle, but in the main its character is quite different and far superior.

The jama given by the above rate should, to prevent delay, be announced as a fixed assessment, but with notice to the people that the question of making it fluctuating is under discussion, and that power is reserved to Government to make it fluctuating at any time before the final sanction of settlement. Meanwhile Mr. Lyall requests that you and the Settlement Officer will report whether it is safe to have a fluctuating assessment, as the Settlement Officer proposes, with the prospect of a canal being made by Mr. Broadway: it seems to Mr. Lyall not improbable that tenants and even proprietors will let their wells fall out of cultivation, and flock to the canal lands, if the canal is made. Mr. Lyall also thinks that if the fluctuating system is introduced remission should only be given from the second successive harvest in which the well is left uncultivated; on the other hand, he considers that a newly-built well should get 3 years at half rates, after the 3 years absolute grace.

Kachi Circle, Jhang.

19. Mr. Steedman proposes the same system of assessment as in the previous circle, with an option of election to certain villages between a fixed and a fluctuating assessment. His rates are Rs. 16 per well and Re. 0-12-0 for sailab, resulting in a revenue-rate jama of Rs. 7,970; while his estimate of the detailed assessments amounts to Rs. 8,702, the present demand is Rs. 6,490. You propose to raise the revenue-rate jama to Rs. 9,201, by increasing the well rate to Rs. 18-6-0 and the sailab rate to Rs. 1-1-0. The Financial Commissioner, looking to the much smaller average depth to water in the wells (14 feet to 22 feet in Shorkot Kachi), and the general superiority of the circle, thinks that the well rate must be put higher than in the Shorkot Kachi. In the latter he put it at Rs. 16. Here he thinks it cannot be put lower than Rs. 17, which is Rs. 1-8-0 lower than Mr. Monckton's rate. This will make the rate's jama Rs. 8,453, which is 37 per cent above the jama of 1874. The increase of assets justifies a very large increase. If the Settlement Officer finds he cannot assess up to these rates he must explain the reasons.

The Bar circles of both tahsils.

20. In both these circles Mr. Steedman proposes to introduce the fluctuating system of well assessment described in paragraph 102 of his Shorkot Report (under which the assessment will fluctuate with the number of wells actually at work), and already referred to in this review.

Copy of a letter No. 244, dated Jhang, 1st December 1879, from E. B. STEEDMAN, *Esquire, Settlement Officer, Jhang, to the Settlement Commissioner, Punjab.*

I HAVE the honor to submit the report called for by paras. 18, 19 and 20, Secretary to Financial Commissioner's No. 167, of 1st October, to your address, in reference to the fluctuating assessment proposed for certain circles of the Shorkot and Jhang tahsils.

2. I am not certain that I fully understand what should be the nature of the report which the Financial Commissioner wishes me to submit. Certain definite questions are put, which I am prepared to answer; but there are also certain alterations suggested, upon which I am not sure that my opinion is called for. I do propose to express my opinions on the suggested alterations, and, if I am wrong in doing so, my excuse must be that I have not fully understood my instructions.

3. The first point is in reference to Mr. Broadway's lease. Is it safe to have a fluctuating assessment with the prospect of a canal being made by Mr. Broadway? Will not tenants and proprietors leave their own lands and flock to the canal? In other words, will it be better to have a fixed assessment, if Mr. Broadway constructs a canal, than a fluctuating one, on the hypothesis that the canal *will* attract proprietors and tenants from the villages adjoining? There is not the least doubt, I think, that Mr. Broadway's canal will draw cultivators from the kachi wells. It is difficult to say how many will be induced to leave existing cultivation. Probably, not a few of the cultivators who have left their homes in the kachi for the Indus sailab or the Muzaffargarh canals will come back when they hear that canal-irrigated lands can be obtained near their native villages. Mr. Broadway is, I believe, to obtain a lease of 4,000 acres, but I do not think more than 2,000 acres are likely to be brought into cultivation. At 10 acres per cultivator, 200 men would be required to cultivate this area. Allowing three able-bodied cultivators to the average kachi well, and supposing that *all* the cultivators came from kachi wells now at work, about 67 wells would thereby be thrown out of work. At Rs. 16 a well, this means an annual loss of Rs. 1,072 to Government. Against this has to be set the average annual rent paid by

Mr. Broadway, Rs. 228, during the currency of his lease, and the very much enhanced rent that Government will be able to assess on these lands at the expiration of the lease. I think it is certain that the Government revenue will suffer some temporary loss on the construction of the canal; but this will, I also think, be more than recouped, on the termination of the lease, by the increase in the assessment of the leased lands.

4. At the same time I consider that, so far from this being a reason for adopting a system of fixed assessment, it is rather an argument in favour of fluctuating jamas. Apparently Government would lose more under a fixed than a fluctuating system. Let us suppose that in ten years Mr. Broadway has constructed his canal and has brought 2,000 acres under the plough; also, that his 200 tenants have all deserted kachi wells and that those wells have fallen out of work. If the assessment is fixed, the proprietors of these wells cannot claim a remission of the revenue as of right; but I am afraid that, in most instances, Government will eventually be obliged to grant remissions. Where the wells are owned by non-cultivating proprietors, they may pay the revenue for a few years after the desertion of their tenants. But this cannot possibly go on for long and, in the end, balances will become irrecoverable and the proprietors will be ruined. Where cultivating proprietors abandon their wells for the canal cultivation, the case is a little different, and, perhaps, the revenue of the deserted wells might be successfully demanded and collected from the owners. But this does not appear to be a very fair or just proceeding. It is also in contravention of the Financial Commissioner's orders, quoted at para. 108, Shorkot Report. In any case, under a fixed assessment there will be some loss to Government, and there will be no counterbalancing gain, as with a fluctuating system, for the Government does not share in the profits on new cultivation. The decrease in revenue under a fluctuating system will be, doubtless, somewhat greater to start with; but I am inclined to think that it will finally be more than compensated by the revenue paid by new cultivation. It must be remembered that cultivation has very nearly reached its limit of expansion in the sailab lands. As the agricultural population increases it will have to resort more and more to the kachi wells for employment.

The light and elastic assessment that has been given to this tract will not be without its effect, and, from what I learnt while lately announcing the jamas of these villages, I believe we are likely to realise a considerable increase in revenue, under a system of fluctuating assessment, during the next twenty years. The tract has recovered wonderfully during the last year and a half. The rabi crop of May 1878 was good, and the following kharif and rabi harvests excellent. The present kharif is also a good average. A large number of wells that had been abandoned in 1877 have again been set to work, wells even whose jamas were remitted during that year.

5. As far as I can judge the argument used in paras. 105 and 108 of the Shorkot Assessment Report to justify my proposals in the case of landlords whose cultivators have absconded, if it holds good where the tenants have gone off to Dera Ismail Khan, Muzaffargarh, or to a sailab village, is equally valid in the case of tenants going to Mr. Broadway's canal. In either case, to continue to take revenue on account of wells out of work must end in ruin to the proprietors or the lambardars. In either case a fluctuating assessment is more profitable to Government.

6. Finally, I may notice the point, to show that it has not escaped my consideration, that, whether the assessment is fixed or fluctuating, the initial jama must be much the same. We cannot, even in the present improving condition of the tract, consider it either safe or expedient to increase our assessment in anticipation of a future increase in assets.

7. The Financial Commissioner has suggested that, where a well falls out of work, the remission of revenue should be given from the second successive harvest in which the well is left uncultivated, and also that a new well should get three years' grace and three years at half rates. These are points of detail, depending so much on mere opinion of what is proper, that I venture to record my dissent with great diffidence. In regard to the first, I have to strongly urge the great importance of giving prompt, full and immediate remissions. Take the case of a well assessed at Rs. 18; it falls out of work in December, owing to failure

of the summer rains after a wretched kharif crop. The proprietor will, in the June following, have to pay up Rs. 12 + Rs. 3 for cesses, and this when he can least of all afford to do so. If the proprietor cannot pay up, the lambardar has to; and this is just what we are trying to prevent. A well is only thrown out of work by a poor proprietor when he finds that he has not the capital to work it. Where proprietors are well off and shift their cultivation from well to well, as the soil needs a rest, my argument does not apply; but it must be remembered that we are assessing the lands of proprietors who are, as a body, not well-to-do.

8. In regard to the second alteration, I think 3 years' half rates too liberal. If Mr. Lyall thinks 3 years' grace insufficient, I would suggest, as an alternative, one year at half rates, after the period of grace allowed, both for new wells and old wells repaired. All new cultivation will be assessed at favourable rates as compared with the cultivation entered in the Settlement Record (*vide* paragraph 102 of my Shorkot Assessment Report). More than this the zamindars do not, I think, expect, and I doubt whether there is any real necessity for further liberality.

9. I am opposed to the plan of allowing to the prosperous villages of the Jhang Kachi, situate alongside the river villages, the option of choosing a fixed or a fluctuating system, on the following grounds. In the first place, no such option is advocated for the Shorkot Kachi; while at the same time there are there a few villages as prosperous and strong as those in the Jhang Kachi in whose favour an exception is proposed. When the zamindars of the Shorkot Kachi found how light my announced jamas were, as compared with those of last settlement, a number of them clamoured for a fixed assessment, and altogether objected to the proposed introduction of a fluctuating one. If we allow the Jhang Kachi zamindars to choose, and not those of the Shorkot Kachi, we shall lay ourselves open to the charge of making invidious and, I venture to think, unnecessary distinctions. In the second place, I think that in the case of fluctuating assessments we ought to recollect that it is in strong villages that the extension of cultivation will be greatest, provided there is room, and least in weak villages. Our assessment is admittedly light, and we propose to recoup any present loss of revenue thus incurred, or future loss on

deserted wells, by assessing new cultivation. I think good villages and bad in the same tract should be taken together and alike made subject to one system; and it is only fair, in the interests of Government, that any diminution of revenue in bad villages should be made up by taxing the increase of cultivation in strong villages.

10. As to the Bar villages, I admit that in the case of many there is no absolute necessity for a fluctuating system of assessment; but there are in both tahsils, and especially in the Shorkot Tahsil, a number of villages where such a system, if not absolutely necessary, is most certainly expedient. The zamindars of these villages will probably apply for a fluctuating system; and I think that, if the Financial Commissioner is unable to recommend the assessment of all the Bar villages on a fluctuating system, still those villages that do wish for such an assessment should be allowed to get it.

11. The proprietors of these Bar villages are many of them rich in cattle, and can fall back on this capital in bad seasons; but I hardly think that in years of good rain-fall they are, to any great extent, in the habit of deserting their wells for the Bar pastures. It does occur undoubtedly sometimes, I admit. What happens is this. The cultivator selects a piece of low-lying land in the Bar, and, having obtained permission from the district authorities to cultivate, he sows it with bajara, til or moth, and squats near it with his cattle. The cost of producing these crops is a mere trifle. But a small quantity of seed is required, the soil is little more than scratched up by the plough, perhaps two or three small drains are dug, and some small ridges thrown up to catch the surface drainage. This is all that is required. If the rain is sufficient and falls at favourable periods the outturn of these "kasht barani" crops is very heavy. There is less of this cultivation towards Jhang and Shorkot; but the zamindars of villages in the Chiniot Tahsil, lying under both the Kerana and Sandal Bars, have often complained that this barani cultivation takes away a large number of tenants in years of good rain-fall.

12. Seeing that there are now 50 per cent. more wells at work in the Jhang and 37 per cent. more in the Shorkot Bar Circle than there were at last settlement, I do

not think that a fluctuating system of assessment would, on the whole, result in any loss to Government. Agriculture is far too profitable now-a-days to be lightly abandoned by a man who possesses many cattle,—in other words capital,—and is therefore presumably in a position to give a sufficient number of yokes to his well.

13. It will hardly be sufficient to insert in the village administration papers a clause to the effect that all old wells restored should be brought into the "bach" at once, or after six months; all new wells after three years; and that wells falling in or unavoidably "thrown" out of cultivation should get full or part remission by "bach" according to the circumstances. It will be necessary to see that effect is given to it. In many villages the administration papers of last settlement contained similar provisions, but they have been systematically ignored. I noted, in paragraph 105, Shorkot Assessment Report, that during the last 20 years there had been hardly any 'baches,' and none by order, and that the private redistributions of the revenue that had taken place were generally imperfect and often unfair. The wells that fall out of work belong to the poor Khewatdars, and the new ones to those who are well off; and it is contrary to all experience to expect that the poor man will be able to transfer any portion of his assessment to the rich man without an appeal to the revenue authorities. So long as he can pay anything the lambardar squeezes him; and it is only when he becomes utterly bankrupt, and can pay nothing, that the lambardar begins to think of calling upon the proprietors of the new wells to pay some quota of the deficiency. If it is probable that hardly any fresh 'bach' will take place except by the order or intervention of the tahsildar, it is a matter for consideration whether the fluctuating system of assessment would not be more effective, with less expenditure of time and labour. I would also again refer you to paragraph 108 of the Shorkot Assessment Report in regard to this point. A new 'bach' is only thoroughly effective when, the assets of the village being equal to or greater than the assets of settlement, it equitably redistributes the Government demand in accordance with the qualities and capabilities of each holding. Where half the wells of a village have fallen out of work, to distribute their jama over the remaining wells is simply ruinous. The only remedy for such a

state of affairs is a prompt remission of the revenue. A fresh 'bach' does not assist us where the assets of the village have materially decreased.

Copy of a letter No. 202S., dated Lahore 14th February 1880, from F. C. CHANNING, *Esquire, Settlement Secretary to Financial Commissioner, to Secretary to Government, Punjab.*

IN paragraph 102 of his revenue-rate report for Tahsil Shorkot, Mr. Steedman, Settlement Officer of Jhang, described a system of fluctuating assessment of wells which he proposed to introduce into certain tracts of the Jhang District. The villages were to be assessed in the ordinary way, and the jamas thus announced to be distributed over the wells in cultivation. The assessment thus fixed for each well was to be paid by the proprietors thereof as long as the well might continue to work, one portion being fixed as the kharif and another as the rabi instalment. If the well should at any time fall out of work, a remission of the assessment on it was to be at once given, dating from the harvest after the well ceased working. But no measurements of the area under crop year by year were to be made, and as long as the well continued to work the well-owners were to pay the full instalment of every harvest when they had raised a crop, however poor that crop might have been. Temporary remissions on account of extraordinary loss from hail, &c., might be given, as in estates subject to the ordinary fixed assessments; but the assessment being light, should be very sparingly granted. New wells were to be free from payment of revenue for three years, and old wells repaired for one year. After the expiry of these respective periods of grace, they were to pay at a well rate uniform in each village, to be announced by the Settlement Officer with the jamas. This system it was proposed in the final shape which the proposals took in the Settlement Commissioner's review of the Shorkot and Jhang reports to introduce—

Shorkot Report, paras. 96-136.
Jhang Report, paragraph 115.
Settlement Commissioner's No. 304, of 22nd July 1879, paragraphs 47 and 48.

(*a*)—Absolutely into the Kachi and Bar circles of Shorkot, the Bar Circle of Jhang, and the Kachi Circle of Jhang, its six northern villages being excepted.

(*b*).—Optionally, at the wish of the zamindars, into the six northern villages of the Kachi Circle of Jhang, such villages of the Wasat of Shorkot as do not possess sailab cultivation, the Wasat Chenab and Utar Wichand circles of Jhang, and to any villages of the Wasat Jhelum Circle of Jhang into which the Settlement Officer, with the consent of the zamindars, might desire its introduction. In circles where its introduction was optional, it was proposed that villages which elected for it should be held to it for the term of settlement, but that villages which might now decline it should be allowed to elect for it hereafter.

2. In passing orders on these reports in this office letter No. 167 S.C., of 1st October 1879, Mr. Lyall questioned (para. 18) whether the remission on wells falling out of use ought not to be given only from the second successive harvest in which the well is left uncultivated; and, on the other hand, whether a well newly built ought not to get three years at half rates, after the three years' absolute grace; and whether in the Shorkot Kachi (para. 18) it would be safe to have a fluctuating assessment with the prospect of a canal being made by Mr. Broadway? If the introduction of the system were finally sanctioned for the Shorkot Kachi, he considered (para. 19) that it would be expedient also in the Jhang Kachi, excluding the six northern villages and the villages bordering on the Hethar; and also that (para. 17) if it were sanctioned for the Bar, its introduction into a few of the northern villages of the Shorkot Wasat might be left to the option of the zamindars. In the Bar Circles (para. 20) Mr. Lyall suggested that it might be sufficient to enter a clause in the administration paper to the effect that all old wells restored would be brought into the 'bach' at once or after six months; all new wells after three years; and that wells falling in, or unavoidably thrown out of cultivation, would get full or part remission according to the circumstances, by a revision of the 'bach' or distribution of assessment. The submission of a further report was therefore requested, as was noted in para. 3 of this office letter No. 196 S.C., of 16th October 1879, to your address.

3. In continuation of that letter, I am now requested to submit Settlement Commissioner's letter No. 518, of 17th December 1879, with its enclosure, from the Settlement Officer, Jhang, submitting the further report called for. Both the Settlement Officer and Settlement Commissioner maintain their former views, that remissions should be granted from the first harvest of the wells being thrown out of cultivation, and that the term of exemption originally proposed for new wells is sufficient. They urge that it should be introduced absolutely into the Shorkot Kachi, Mr. Broadway's canal notwithstanding, and also into the whole of the Jhang Kachi, except the six northern villages. They adhere also to their original proposals for the introduction of the fluctuating system into the Bar circles, and, at the option of the zamindars, into three villages of the Shorkot Wasat; and again urge that, if found expedient, the zamindars of villages, which are almost entirely dependent on well irrigation, in the Wasat Chenab, Utar Wichand, and Wasat Jhelum circles of the Jhang Tahsil, may be allowed the same option.

4. Mr. Lyall, having considered the further arguments now adduced, directs me to remark that the weak and decayed condition of a very large proportion of the villages of the Kachi tract in Jhang has long been notorious. It is a very poor and uninviting-looking tract; but, judging from report and from the number of old wells in it, it must have been, at one time, relatively in much better condition than at present. It has retrograded rather than improved since annexation, whereas there has been immense improvement in other tracts. When Mr. Lyall first visited the tract several years ago the people attributed its former prosperity to the system of well assessment, which they said had prevailed under the Dewan, by which each well paid Rs. 5 for the kharif and Rs. 7 for the rabi, and the demand was remitted if the well fell out of use. Mr. Lyall told the people that a fluctuating system of assessment might perhaps be sanctioned if they wanted it, and, rather to his surprise, the leading men took up the idea warmly, and have ever since (*i. e.*, down to present announcements: as to change of opinion since in some villages, *see* para. 9 of Settlement Officer's letter now submitted) been asking for it.

When the proposals for fluctuating assessment of wells came up in the Settlement Officer's assessment reports, and in

the Settlement Commissioner's review, Mr. Lyall was prepared to decidedly recommend the adoption of the system in the Kachi tract in both tahsils, or in all but a few villages; but he hesitated in respect to the Bar, for reasons given at the end of para. 20 of this office No. 167 S. C., of 1st October 1879, to Settlement Commissioner. He therefore called for the further report.

5. He now agrees with the Settlement Commissioner and the Settlement Officer in recommending that the system be tried in the whole of both Kachis except the 6 villages in the north of Tahsil Jhang Kachi. He also agrees that the remission should be from the first harvest the well is out of use, and that the Settlement Officer's proposed term of grace is sufficient. He also agrees in thinking that the prospect of Mr. Broadway's canal should not be considered an obstacle to the introduction of the system: he agrees that it will be good policy to run the risk of some temporary loss thereby. The only remark he desires to make on the Settlement Officer's answer on this point is, that he thinks Mr. Steedman's estimate of the area to be irrigated from the canal at 2,000 acres is too low. If the canal is successfully made (which is at present quite problematical, as the Settlement Commissioner says), it will, Mr. Lyall thinks, very likely irrigate much more than 2,000 acres, not inside the grant to Mr. Broadway, but outside it. However, such irrigation outside the grant will lead to the sinking of new wells, or the restoration of old ones, in the land so irrigated, whereby Government, under the fluctuating system, will gain.

6. As to the Bar circles, Mr. Lyall still thinks the system not so necessary here as in the Kachi; yet he thinks that the Settlement Officer and SettlementCo mmissioner have proved its expediency. Even if Government is not quite satisfied with the proof, Mr. Lyall thinks that the experiment may be tried with advantage; the amount of revenue which can be lost is very small, and the fixed system can be easily reverted to at any time if thought necessary He therefore recommends the introduction of the system, not optionally, but by order.

7. As to the Settlement Commissioner's proposal (in his paras. 7 and 8) as to the optional extension of the system to

certain villages of other circles, Mr. Lyall withdraws his objection for the same reasons as for Bar circles. The Settlement Commissioner has, Mr. Lyall thinks, stated the reasons for his proposals forcibly, and it is not necessary to repeat them.

8. I am to add that one reason why Mr. Lyall was at first rather reluctant to support these proposals about fluctuating well assessments, or rather very cautious as to the extent to which he did so, was, that some rather similar proposals made for the Leiah Thal wells were not approved by Government (*see* your No. 1942 of 10th November 1877). I am also to add that Mr. Lyall is aware that it may seem strange that in Jhang he should recommend fluctuating assessment of Bar wells and fixed of sailab cultivation, while in other districts of the division the contrary has been proposed; but the fact is that in Jhang observation seems to prove that it is the Bar wells and not the sailaba lands which have been injuriously affected by fixed assessments.

9. In conclusion, I am to solicit the favour that orders may be passed on these proposals as early as may be possible.

EXTRACT No. VIII.

FLUCTUATING ASSESSMENTS IN DERA ISMAIL KHAN.

[For the Dera Ismail Khan District fluctuating assessments were proposed in the Daman-irrigated tracts as well as for the low-lying lands along the banks of the Indus locally called the "Kachi." The details of the proposals made and sanctioned will be gathered from the following extracts made.—H.C.F.]

(I) *Extract of a letter No.* 1299, *dated Lahore, 5th November* 1874, *forwarding proposals for the assessment of certain Daman tracts in Dera Ismail Khan, from* W. M. YOUNG, *Esquire, Officiating Secretary to Financial Commissioner, Punjab, to the Secretary to Government, Punjab.*

* * * * * *

2. It is shown by the Settlement Officer and the Settlement Commissioner that the tracts which depend for their cultivation on the uncertain supply of water brought down by the hill torrents after heavy rain are quite unfit for a fixed assessment of land revenue. Up to the present time the villages have been held either under direct management or by farmers who have collected in kind by battai from the cultivators. The burden of a fixed assessment has therefore never been felt by the people.

3. The land is held by a number of small proprietors of slender resources, who are quite unable to meet a fixed land-revenue demand when their crops fail, unless that demand is fixed at such a low rate as to cause much loss to Government. If the land-revenue demand is fixed at this low rate a very great loss will be inflicted on the jagirdars, by whom a large portion of the tract is held. It will, moreover, be impracticable for Government to undertake the construction of works to improve the irrigation, as there will be no room for imposing a water rate for such improvements. The Financial Commissioner concurs, therefore, with the Settlement Commissioner and Settlement Officer in thinking that the assessment should be fluctuating, and should be based upon the area under cultivation at each season in the tract now under notice.

4. The mode of assessment proposed generally for adoption is—

1*st.*—To make a certain proportion, which is about one-fourth of the average demand, fixed and leviable invariably, whether the land has been irrigated or not.

2nd.—To fix a rate per acre or other unit of area for each kind of crop which has ripened,—the amount of these rates being left to future decision.

The plan here proposed is similar to that adopted in the Dipalpur and Pakpattan tahsils of the Montgomery District. Newly-cultivated lands will escape the fixed demand, which is, in the Financial Commissioner's opinion, proper. The boundaries of fields in this tract are defined by high banks made to hold up the water which reaches the fields. These banks are massive and large, and are from their nature permanent. When the area of a field has once been ascertained it will not be necessary to measure it with the chain on each occasion of assessment. The process of ascertaining the assessable area will therefore be comparatively simple, and this is a reason in favor of the proposed system.

Copy of a letter No. 243, *dated Lahore, 9th February* 1875, *from* T. H. THORNTON, *Esquire, Secretary to Government, Punjab, to the Officiating Secretary to Financial Commissioner, Punjab.*

IN reply to your No. 1299, dated 5th November last, regarding the proposed modes of revenue assessment in certain Daman tracts of the Dera Ismail Khan District, I am desired to forward copy of a letter from the Commissioner, Derajat Division, No. 25, dated 25th ultimo, together with copy of a note from Mr. Lyall, dated the 3rd instant, and to state that the Lieutenant-Governor approves of the system of assessment proposed in paragraph 4 of your letter.

Extract of a letter No. 659*S., dated Lahore, 3rd July* 1876, *forwarding the assessment report of the Dera Ismail Khan Tahsil, from* W. M. YOUNG, *Esquire, Settlement Secretary to Financial Commissioner, Punjab, to the Officiating Secretary to Government, Punjab.*

THE DAMAN CIRCLES—4 TO 7.

* * * * *

The Daman circles.

19. These 4 circles are very similarly circumstanced. They are watered by hill torrents. In Government letter

No. 243, dated 9th February 1875, His Honor the Lieutenant-Governor approved of a system of fluctuating assessment which was proposed for these circles. This has been carried out.

The fixed portion of the new assessment has been calculated by applying soil rates to the cultivated and fallow area obtained at measurement. Differential croprates are proposed for the fluctuating assessment.

The probable financial result is obtained by applying the differential crop rates to the area which may be safely assumed as likely to be cultivated in ordinary years, and adding to this sum the fixed portion of the assessment.

Method of explanation.

20. The mode in which these calculations have been made requires further explanation.

The estimate for ½ fixed jama.

It appears at first sight somewhat superfluous to go through all the calculations ordinarily required for the formation of a rate jama in order to arrive at a result which after all is only a fraction of the demand; but there is no doubt that advantages will result from a full record of Mr. Tucker's experience in regard to the various processes required for framing the estimate, of which he has given full detail.

How made.

21. The mode in which the fixed portion of the demand is determined is described by Mr. Tucker in paragraph 63 of his report. He framed arbitrary rates for the different circles and applied them for purposes of comparison to the different villages. The cultivated area in the year of measurement was very large, and the Settlement Officer, therefore, discards the produce estimates based upon that area for purposes of comparison.

The revenue rates for the fixed portion of the jamas are as follows :—

Circle.	Chahi.	Sailaba Darya.	Rod Kohi.	Barani.	Fallow to 3 years.	Fallow 4 years to 10 years.
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
Gumal Takwara...	1 0 0	0 14 0	0 6 0	0 4 0	0 4 0	0 2 0
Luni Awal ...	...	...	0 8 0	...	0 4 0	0 2 0
Luni Doyam ...	1 0 0	0 14 0	0 6 0	0 4 0	0 4 0	0 2 0
Luni Gadh Toah,	1 0 0	0 14 0	0 8 0	0 4 0	0 4 0	0 2 0

In the village statements appended to the maps of each circle in the volume which accompanies, these rates have been applied to their respective areas in each village as ascertained at measurement, and the result altered according to the capacity of each village, so as to bring out the proposed fixed jamas.

The result.

22. The following table shows the result :—

Circle.	Jama according to rates.	Proposed fixed jama of which ¼ is to be taken.	Actual fixed assessment.	
	Rs.	Rs.	Rs.	
Gumal Takwara ...	18,433	19,690	4,922	
Luni Awal ...	18,407	15,555	3,888	
Luni Doyam ...	8,891	6,410	*2,618	* Comprising other lands besides those with fluctuating assessment.
Gadh Toah	21,471	21,880	5,470	

The determination of the total fixed jama is, as Mr. Tucker admits, arbitrary in two respects : (1) in regard to the rates applied ; (2) in regard to the modifications made in the rate jama.

Mr. Tucker's knowledge of the country must, in regard to this portion of the demand, be accepted as affording justi-

fication to this computation, which can only be tested by considering the fixed and fluctuating portions together: this will be done presently.

The estimate for determining fluctuating jamas.

23. For determining the fluctuating jamas, the Settlement Officer at first devised differential crop rates, which are given in a table appended to paragraph 7,0 of his report; but the Settlement Commissioner asked him to revise these (1) by giving greater detail of crops, (2) by reducing the rates; and the crop rates which are now proposed for adoption are those given in Mr. Tucker's supplementary memorandum dated 22nd April 1876. The reductions have been made with a view to bringing the necessity for remissions in future years to a minimum.

The following table shows the rates :—

	Gumal Takwara.			Luni Awal.	Luni Doyam.		Gadh Toah.	
	1st class.	2nd class.	3rd class.		1st class.	2nd class.	Main portion.	Dagar portion.
	Rs.A.P.	Rs.A.P.	Rs.A.P.	Rs.A.P.	Rs.A.P.	Rs.A.P.	Rs.A.P.	Rs.A.P.
Wheat ...	0 14 0	0 12 0	0 10 0	1 0 0	0 14 0	0 10 0	1 0 0	0 12 0
Cotton and melons.	0 10 0	0 9 0	0 8 0	0 10 0	0 10 0	0 8 0	0 10 0	0 10 0
Sarsôn ...	0 10 0	0 9 0	0 8 0	0 10 0	0 10 0	0 7 0	0 10 0	0 8 0
Bájra ...	0 8 0	0 7 0	0 6 0	0 10 0	0 8 0	0 7 0	0 10 0	0 7 0
Jowár ...	0 8 0	0 7 0	0 6 0	0 8 0	0 8 0	0 7 0	0 8 0	0 7 0
Barley ..	0 10 0	0 9 0	0 8 0	0 10 0	0 10 0	0 7 0	0 10 0	0 8 0
Afsun ...	0 8 0	0 7 0	0 6 0	0 8 0	0 8 0	0 6 0	0 8 0	0 6 0
Til ...	0 10 0	0 9 0	0 8 0	0 10 0	...	...	...	...
Average rate	0 9 9	0 8 0	0 7 7	0 10 3	0 9 8	0 7 5	0 10 3	0 8 8

These differential crop rates were obtained by: (1) experiments to discover the actual yield; (2) by calculation of the average yield of crops from the patwaris's records of former years in selected villages; (3) by a consideration of the rent rates obtaining in the several circles; and (4) by enquiry from the people and from jagirdars who have collected in kind. Payment in kind is a custom so general in this tahsil that the records of yield which the patwaris's papers give are unusually trustworthy. The village transactions are settled by these records, and it is the interest of many persons to secure their accuracy. Although the rates thus arrived at were greatly reduced by Mr. Tucker before he made his first proposals, yet the Settlement Commissioner wishes for a still further reduction of 10 per cent. or thereabouts in the rates on cotton, sarsôn, bájra and jowár in the Luni Doyam, Gumal Takwara, and Luni Gadh Toah circles, or in some sub-divisions of them; and these reductions have been effected by Mr. Tucker in his supplementary memorandum. The final result is that given above in tabular form.

Moderation of the rates.

24. The rates thus formed are, in the Financial Commissioner's opinion, beyond criticism as regards their moderation. It remains to see what they will produce.

Area to which rates will be applied in future years.

25. In paragraph 72 of this report Mr. Tucker describes the method by which he arrived at an estimate of the area of each crop which might be estimated as likely to be cultivated in future years. Nine villages were taken in each circle, and the lessees' assets for the whole circle and for these nine villages ascertained, as well as the area under cultivation in these villages in 1872-73 and 1873-74, and it was reckoned that the future cultivated area would bear the same proportion to the whole assets of the circle as the area in these nine villages would bear to their assets.

Result of application of fluctuating jamas to future estimate of cultivated area.

26. The result of the application of the crop rates, revised for the fluctuating jama, to the estimated area under cultivation in future years, gives an average total of

fluctuating revenue, which is entered in column 6 of the subjoined statement:—

Name of Circle.	Captain Coxe's settlement.	Jama 1873-74.	Jama by rates.	Proposed Jama.			Percentage of increase.
				Fixed.	Fluctuating.	Total.	
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
Gumal Takwara ...	16,529	16,246	18,433	4,922	13,546	18,468	13·7
Luni Awal ...	10,080	10,846	18,407	3,888	13,012	16,900	55·8
Luni Doyam ...	3,517	3,990	8,891	2,618	4,398	7,016	75·8
Gadh Toah ...	19,457	17,997	21,471	5,470	15,763	21,233	18·0

After all has been said it is necessary to admit that the calculations upon which these jamas have been based are merely guides of a general character. The fixed assessment is a very small sum. The differential crop rates are very moderate, and as they will be applied only to land in which a crop has been produced, they may safely be sanctioned for the fluctuating assessment as recommended by the Settlement Commissioner.

Extract of a letter No. 1643, *dated Lahore,* 20*th October* 1876, *from* Lepel Griffin, *Esquire, Officiating Secretary to Government, Punjab, to the Secretary to Financial Commissioner, Punjab, in reply to No.* 662.

* * * * * *

6. Two distinct sets of proposals are submitted in regard to the three Nasheb circles: the first set proceeding on the assumption of a demand fixed for the term of settlement; the second on the assumption of a demand fluctuating with the area under tillage. The first proposals have been worked out on the usual principles and in the usual way. The second proposals have been framed by an arbitrary reduction of the rates yielded by the first. The Financial Commissioner's recommendation for sanction being accorded to the results attained by the ordinary system, is subject to his advocacy of the alternative system which yields totally different results; and he prefers the latter system, though it is plain that he regards the effect of

the former as just. The Lieutenant-Governor will briefly consider—

(1). Whether the results of the usual methods are equitable to the people and to Government; and

(2). Whether there are sufficient reasons for preferring the mode of assessment suggested as an alternative.

7. The percentages of increase in cultivation are 81 for the Pakka Circle, 213 for the Kacha Circle, and 290 in the Bet Circle; the number of wells in the Nasheb has risen since 1862 from 671 to 823, and population has spread in each of the three circles in a ratio of 25 per cent., 174 per cent., and 56 per cent., respectively.

The effect of the new revenue rates is noted in the margin, and it will be seen that the total is in each case below the produce jama; the figures given include the proposed equivalent for the tirni revenue which will again be referred to below. The statistics of the Nasheb certainly point to a large enhancement of revenue, and the percentages of increase on the present demand, namely, 34·33 in the Pakka, 76·15 in the Kacha, and 69·87 in the Bet only, appear formidable, if viewed apart from the extension of the cultivated area. Considering that this extension may well be termed vast, that the new revenue rates are much below those heretofore in force, that the rates of yield assumed for the produce jama are regarded as fair, that the price current accepted for the calculation is in respect of all the principal crops below the average of the last 20 years, that the sailaba rates in particular are shown by the Settlement Commissioner (paragraph 14) in a careful comparison with rates on like soils in similar localities to be appropriate, and that the revenue-rates assessment on cultivated and fallow is less than that which would be gained by the application of the rates of the summary settlement even after deducting one-fourth for the difference between the present and past share of the produce,—there can be no doubt that what may be termed the Settlement Officer's regular estimate is a very moderate forecast

	Present. Rs.	Produce. Rs.	Proposed. Rs.
Pakka ...	49,557	69,868	66,570
Kacha ...	14,278	28,601	25,151
Bet ...	9,383	18,244	15,939
	73,218	1,16,713	1,07,660

of the fixed revenue of the tahsil; and were it not for the circumstance about to be described, the theoretical sufficiency of the proposed increase, large though that be, might even be open to question.

8. This circumstance is that the great prosperity of the Nasheb has lately received a temporary check from the prevalence during the last two or three years of high floods and low prices. For the time, the means of the population have been restricted, and this restriction may be the more felt because the standard of living has been raised by their fortunate circumstances since 1862. The present is, therefore, an unsuitable moment for a severe enhancement, and the Settlement Officer and Settlement Commissioner agree in recommending a method of assessment which will certainly relieve the people in the first instance and promises to secure Government against ultimate loss. They propose to reduce the regular revenue rates except on well and waste lands, and to charge a uniform rate of Re. 0-10-8 on all new cultivation, the revenue on land falling out of cultivation to be remitted after one year. The comparative effect of the regular and alternative estimates will be seen from the following table :—

Circle.	Jama by rates given in Settlement Officer's paragraph 47, plus rates on waste, Settlement Officer's paragraph 57.		Initial Jama under alternative system.	
	Jama.	Percentage of increase on present jama.	Jama.	Percentage of increase on present jama.
	Rs.		Rs.	
Pakka ...	66,570	34·33	60,121	21·31
Kacha ...	25,151	76·15	21,166	48·24
Bet ...	15,939	69·87	13,520	44·08
Total ...	1,07,660	36·85	94,807	29·48

The proposal, therefore, involves an initial reduction of the former enhancement amounting to Rs. 12,853. But looking to the circumstances of this part of the tahsil, to the fact that a similar measure is in force in the Mianwali

Kachi and has been recently sanctioned for the Isa Khel parganna, and to the experience gained in Mooltan and Montgomery, Sir Henry Davies concurs in the Financial Commissioner's opinion that it is desirable to have a fluctuating assessment where the cultivation much depends upon so variable a phenomenon as the inundation of a river. The alternative system with its initial results is accordingly sanctioned by His Honor, discretion being left to the Settlement Officer to fix progressive jamas in the few particular instances where it is possible that these may be required.

* * * * * *

11. Turning now to the Daman tracts, it will be unnecessary to follow the successive steps which guided Mr. Tucker in the difficult task of estimating a fluctuating revenue. It is sufficient to say that he drew his conclusions from actual experiment, from the measurements of the areas under different crops in 9 selected villages in each circle, from the patwaris's papers which appear, for reasons given by the Financial Commissioner, to be exceptionally trustworthy, and from special enquiries both through his own establishment and from the people and jagirdars. By this process he has arrived at a differential crop-rate jama. Three-fourths of this represents the fluctuating revenue; and such fluctuating revenue, added to the fixed portion of the assessment (which is one-fourth of the ordinary soil-rate jama, calculated in the usual way), forms the total estimated revenue, which will of course vary from year to year in proportion to crops and cultivation.

12. The proposals for the whole of the Daman, as set out in the Assessment Report, have been subsequently modified. Two villages came experimentally under the new system, and great reductions had to be made. The Settlement Commissioner having suggested that the Settlement Officer should lower his rates, the latter came to Mooltan and prepared revised proposals with a view to reducing the necessity for remissions to a minimum. These revised proposals are contained in Mr. Tucker's memorandum of the 22nd of April and meet with the full concurrence of Mr. Lyall and the Financial Commissioner.

13. The four Daman circles are alike in their general characteristics and are respectively named from the several hill streams which water them.

The effect of the recommendations ultimately agreed upon is thus given by the Settlement Officer:—

1	2	3	4	5	6
Name of Circle.	Jama, 1873-74.	Proposed Jama.			Percentage of increase.
		Fixed.	Fluctuating.	Total.	
	Rs.	Rs.	Rs.	Rs.	
Gumal Takwara ...	16,246	4,922	13,546	18,468	13·67
Luni Awal ...	10,846	3,888	13,012	16,900	55·81
Luni Doyam ...	3,990	2,618	4,382	6,900	72·93
Luni Gadh Toah ...	17,997	5,470	15,763	21,233	17·98

In regard to the ordinary soil-rate jamas, which are quadruple the amounts entered at column 3 in the above statement, the Financial Commissioner observes that they are arbitrary both as to the rates adopted and as to the modifications made in the results which the rates yield. He also states that it is necessary to admit the calculations upon which the Settlement Officer's final jamas for the Daman are based to be merely guides of a general character. But he considers the rates included in the memorandum of the 22nd of April to be beyond criticism in point of moderation; and with reference to the two circles where the percentage of increase is high, it has been noted, *first*, that the Luni is the largest of the hill streams; *secondly*, that the Luni Awal Circle is the richest part of the Daman, and is nearly all held in jagir by Nawab Fouzdar Khan; and, *lastly*, that the Settlement Commissioner at first thought the fixed assessment for the Luni Doyam Circle too heavy, but finally withdrew this opinion when the Settlement Officer more fully explained its circumstances. It appears that the 1st class villages are here improving rapidly, whilst a good deal of the land towards the west is nearly equal to that of the Luni Awal Circle, and a reduction of a fourth of the rate on the Rod-Koi lands is considered equivalent to the difference between the two circles irrigated from the Luni stream. Under these circumstances, the proposals of the Financial Commissioner regarding the Daman, including the rules for assessing crop rates, and

suggestions referred to and recorded in the Settlement Commissioner's paragraph 10, are accepted and sanctioned by His Honor.

Extract of a letter No. 662, *dated Lahore,* 3*rd July* 1876, *forwarding the revenue rate report of the Bhakkar Tahsil, from* W. M. YOUNG, *Esquire, Settlement Secretary to Financial Commissioner, Punjab, to the Officiating Secretary to Government, Punjab.* (II)

* * * * * * * *

Alternative system of assessment for Nasheb circles.

17. Before going on to the Thal circles it is necessary to discuss the alternative system of assessment of the Nasheb circles proposed by Mr. Tucker in paragraph 70, and supported by the Settlement Commissioner in paragraph 21.

The proposed system is "to allow a considerable reduction in the assessment rates, coupled with a provision for the annual assessment of new cultivation, and for the remission of revenue on abandoned lands."

The Financial Commissioner thinks the alternative plan of fluctuating assessment the one best suited to the lowlying tract in this tahsil, subject to the Indus floods.

If the productive powers were fairly certain, he would not recommend anything but a fixed assessment; but they are uncertain. Remissions must be given to villages which suffer, and Mr. Egerton thinks that a system by which the lands actually cultivated should bear the assessment is most advantageous both to the people and to Government. By the arrangement proposed the lands thrown out of cultivation will be relieved from assessment, and yet Government will obtain revenue from lands newly cultivated.

The experience gained on the Ravi in Mooltan and Montgomery shows how desirable it is to have a fluctuating assessment where the cultivation depends much upon so variable a phenomenon as the inundation of a river.

The success of the measure in the Mianwali Kachi is a good reason for introducing a measure of the kind here also, and the Financial Commissioner therefore recommends the alternative plan of assessment for sanction.

Copy of a letter No. 1047, *dated 9th October* 1876, *from* W. M. YOUNG, *Esquire, Settlement Secretary to Financial Commissioner, Punjab, to the Officiating Secretary to Government, Punjab.*

I AM desired to submit, with the Financial Commissioner's general concurrence in the proposals therein made, a letter No. 55S., of the 22nd ultimo, and enclosure from the Settlement Commissioner, Mooltan and Derajat divisions, with its enclosure, recommending certain alterations in the system first proposed in Mr. Tucker's Assessment Report of the Bhakkar Tahsil of the Dera Ismail Khan District, submitted with this office No. 662, dated 3rd July last, of a fluctuating assessment for the Kacha or Nasheb lands of that tahsil.

2. I am to add that Mr. Egerton has not delayed this reference to make a minute review, as the report upon the Bhakkar assessment was sent up to Government some time ago, and he wishes this letter to be considered before orders are passed upon that report.

Copy of a letter No. 55*S., dated Sheikh Budin, 22nd September* 1876, *from* J. B. LYALL, *Esquire, Settlement Commissioner, Mooltan and Derajat Divisions, to the Settlement Secretary to Financial Commissioner, Punjab.*

IN Mr. Tucker's Assessment Report for the Bhakkar Tahsil of the Dera Ismail Khan District, and in paragraph 21 of my forwarding letter No. 50, of 31st January last, we proposed to introduce a system of fluctuating assessment for the Kacha or Nasheb lands of the tahsil. Mr. Tucker described the system in his report: it was based upon a plan of assessment of sailaba lands which I had suggested for general use in the south of the Punjab in a letter to your address written some eight months previously. I now forward copy of a memorandum by Mr. Tucker recommending certain alterations of detail in the first proposals. We are sorry to give trouble in this way, but trust that the novelty and importance of the subject will be our excuse.

2. There were two points in this proposed system about which we were in some doubt: the first was the rule

for not remitting the revenue of sailaba fields till the second year in which they have been continuously out of cultivation. This rule was in theory wrong, but I thought it would have some practical advantages, and Mr. Tucker assented to it, though with some reluctance.

No such rule has been in force in the Bannu District or in those parts of Dera Ismail Khan where a fluctuating assessment of Nasheb lands has been hitherto in force. After consulting again with Mr. Thorburn, who has much practical experience of the working of the fluctuating system, and with Mr. Tucker and some native officials, I am convinced that the rule is not necessary, and would work unfairly, I therefore recommend that our former proposals be amended by striking it out.

3. The second point was the proper mode of assessing well cultivation in sailaba lands. There are scarcely any wells in the Bannu Nasheb villages, the few there are are on the edge of the high lands beyond the ordinary flood line, and were made as much to supply drinking water as for cultivation. They can safely be excluded from the Nasheb, and their assessment included in the fixed jama of the Bangar or Thal lands of the villages. We have therefore no experience in Bannu to guide us in deciding how to assess the chahi sailaba lands of Bhakkar and Leiah. In the latter parganna wells are numerous in parts of the Nasheb. The mode explained in the accompanying memorandum has, for some time past, seemed to me to be the most practicable of several plans which my observations in different districts have suggested. I mentioned it to Mr. Tucker, and, after some enquiry and examination of papers he decidedly concurs.

4. I quite agree in the proviso recommended in paragraph 3 of the memorandum; it will prevent the nauábád rate from being higher than the settlement or "pertá deh" rate, as it would otherwise be in the case of a few villages in which the settlement rate has had for certain reasons to be put exceptionally low.

5. With the modifications now proposed the system is extremely simple, the zamindars will understand it clearly, and it will be hardly possible for the patwaris to cheat or make mistakes. It will also be very easy to test the work rapidly.

Revised proposals by H. ST. G. TUCKER, *Esquire, Settlement Officer, Dera Ismail Khan, for the assessment of Kachi villages on the Indus, dated 20th September* 1876.

PROPOSALS for the assessment of the alluvial portion of the Bhakkar and Leiah tahsils are given in paragraph 70 of the Bhakkar Assessment Report.

Mr. Lyall, the Settlement Commissioner, is of opinion that some alterations should be made in the first proposals, in which I fully concur.

1. We think that the revenue on abandoned and fallow lands should be remitted at once and not after the interval of a year. The object of making the zamindars pay nakáshta (revenue on uncultivated land) for the first year was to prevent men from wantonly throwing their lands out of cultivation to the detriment of the Government revenue. The proportion of real fallow in the alluvial villages is generally very small, and zamindars are not likely with the light rates proposed to leave abandoned lands which are fit for cultivation. On the other hand, the one-year proviso is likely to defeat to a great extent the purpose for which this fluctuating system is to be introduced.

This is to equalise as far as possible the demand to the assets, and to remedy the uncertainty occasioned by the varying action of the river floods. Lands are thrown out of cultivation either owing to want of sailab or owing to deterioration caused by flood waters standing for a long time on the ground. In the latter case, the injury caused often lasts for three or four years. In the former case (*viz.*, the failure of sailab) no permanent injury is caused at all, and the lands will be cultivated as usual the following year if the season is favorable. The Indus floods vary greatly from year to year, and it is seldom that a succession of three or four years of high floods or low floods occurs without a break. As a rule, high average and low floods alternate without any special sequence. Consequently, half the area of a village may be out of cultivation one year owing to want of sailab, and the next year the whole is under cultivation. In this case, under the one-year system, no remission would be allowed. This we consider would be somewhat of a hardship, and recommend therefore that the revenue on such lands be remitted at once.

2. The second point as regards the assessment of well lands. We propose that the increased assessment on well lands by chahi rates, as compared with assessment by sailaba rates, be separated off into a well abiána jama and *bach-ed* on the wells of each village with regard to their relative capacities as a lump-sum abiana jama on each well.

In addition to this the well cultivation would annually be assessed at sailaba rates, as has been proposed for sailaba lands. In case of a well falling in, such additional well jama would be remitted till the well was again brought into use. In case of diluvion of lands shown at settlement as chahi, a proportional reduction would be made in the abiana of the well to which the lands belonged, unless the well owner has other land adjacent to the well, shown as sailaba, or as uncultivated at settlement, to which he applies the well water, and so makes good the area recorded as chahi at settlement. I mean that though this abiana is in the first instance assessed as a lump sum on the well itself, still for diluvion remissions the abiana would be supposed to be *bach-ed* over the irrigated area of the well affected, and the jama of the lands washed away would be remitted accordingly. Of course, if a well itself washed away, leaving a portion of the old well area, the whole abiana would be remitted, the remaining well lands being treated as sailaba.

We consider that this would be better than making the whole well jama fixed, or than the arrangement that I contemplated for the Leiah Tahsil, of treating chahi lands in the same way as sailaba, *i. e.*, releasing the whole revenue for lands falling out of cultivation. Under this latter arrangement there is nothing to prevent a well owner from abandoning the lands now recorded as chahi, and so escaping the chahi assessment and putting the water on to nauábád lands, which would be assessed at much lighter rates. By this the Government would suffer. On the other hand, the proposal to measure up the well-irrigated area every year, and to charge it at chahi is objectionable, as it would involve discrimination of chahi sailab from simple sailab cultivation in yearly measurements, and would also tend to check well cultivation. In sailaba villages in favorable seasons wells are often hardly used; in other years they are utilized so as to give a single watering to a large area generally cultivated as purely sailaba. Under such a

system, therefore, the chahi assessment would be heaviest in the years when the well owner was least in a position to pay a high jama.

The proposal to separate the abiana assessment from the ordinary sailaba revenue will not lead to any loss of revenue, as I should simply *bach* on the different villages the increased assessment that I originally intended to put on chahi lands.

New cultivation would not be assessed for the first two years. Lands irrigated from new wells sunk after settlement would pay at sailaba rates only.

3. In the Bhakkar Tahsil I proposed to charge nauábád lands at a uniform rate through the whole Nasheb. I think it would be well to qualify this by the proposal that I have made in paragraph 44 of the Leiah Report, that when the village rate is less than 10 annas 8 pie, the nauábád rate should be the same as the village rate.

Extract of a letter No. 152, *dated* 20*th January* 1877, *from* C. L. TUPPER, *Esquire, Officiating Under-Secretary to Government, Punjab, to the Officiating Secretary to Financial Commissioner, Punjab.*

I AM desired to return the original enclosures of your letter No. 1047, dated 9th October last, submitting certain additional proposals relative to the assessment of the Bhakkar Tahsil in the Dera Ismail Khan District, and to make the following observations.

2. As the Financial Commissioner expresses general concurrence in the recommendations of the Settlement Commissioner, these are all sanctioned by the Lieutenant-Governor, unless in connection with the orders on the Bhakka Assessment Report, conveyed in this Office letter No. 1643, dated 20th October last, Mr. Egerton has any modifications to propose.

EXTRACT No. IX.

FLUCTUATING ASSESSMENTS IN BÁNNU.

[In Bannu a fluctuating assessment had already been in force since 1864-65 in the Mianwali Tahsil as regards the lands flooded by the Indus. How far the system was extended at the present settlement will be seen in the following extracts.—H.C.F.]

Extract of a letter No. 4, dated Lahore, 3rd January 1876, *from* F. W. R. (1) FRYER, *Esquire, Officiating Settlement Secretary to Financial Commissioner, Punjab, to the Secretary to Government, Punjab, being the Review on the Assessment Report of the Isa Khel parganna.*

* * * * * * *

3. In paragraph 17, Mr. Thorburn notices a peculiar system of assessing the alluvial lands of the Kachi, which affects a large area, paying the largest portion of the revenue in the *Danda, Kachi Nahri* and *Kachi Pakka* circles. Mr. Thorburn describes this system thus :—

"The whole cultivated area, for the time being, of river lands is annually measured and assessed at the mauzawar settlement rates, and the revenue on all lands not actually under the plough is remitted. By this process the alluvial lands have been gradually brought under assessment, as they were broken up for cultivation, and the land revenue demand has been gradually increased to an amount which it would have been impossible to exact if the enhancement had been deferred until the revision of settlement."

In considering Mr. Thorburn's proposed assessments, it is important to bear in mind that under this system the enhancement of land revenue, which the improved condition of the parganna warrants, has been for the most part anticipated by these annual increments.

Extract of a letter No. 532, *dated Lahore,* 20*th March* 1876, *from* LEPEL GRIFFIN, *Esquire, Officiating Secretary to Government, Punjab, to the Secretary to Financial Commissioner, Punjab, conveying orders on the above.*

* * * * *

III.—*Danda Circle.* In this and the following circle the Settlement Commissioner considers that Mr. Thorburn's rates for the Kacha are appropriate, provided the present

principle upon which the alluvial lands are assessed be kept in operation. The Financial Commissioner recommends the continuance of the system in force as it has answered well, and the people are well satisfied with it; accordingly, the maintenance of the existing method of the annual assessment is sanctioned by His Honor.

---

(2) *Extract of a letter No. 18M., dated Murree, 6th July 1876, from* J. B. LYALL, *Esquire, Settlement Commissioner, Mooltan and Derajat Divisions, to the Settlement Secretary to Financial Commissioner, Punjab, forwarding the Assessment Report of the Marwat parganna.*

* * * * * * * * *

Suggestions for relaxing the annual fixity of assessment in certain circs.

11. In paragraph 31 Mr. Thorburn states how the proposed assessment ought, in his opinion, to be worked.

By a cyclical system he means a plan whereby a village would engage to pay so many rupees in a term of, say, eight years, instead of so many rupees per annum. The Deputy Commissioner would roughly proportion the demand for each harvest to the yield. He would also, of course, be partly guided by the price current, and, towards the close of the cycle, by the proportion of the sum total which the village had already paid in. At present the Deputy Commissioner can suspend in a bad season, that is, postpone a part of the demand, in the hope that the next season may be a favourable one; but he cannot collect anything in advance in a series of good seasons. Our system of fixed annual demand supposes that the zamindars will store up part of the profits of good seasons wherewith to meet the demand in bad ones; but the only way in which the poorer peasant proprietors can do this is by having running accounts with their bankers, and the terms upon which these bankers conduct their dealings tend to drag all but the very lucky or very thrifty small proprietors into debt. We at one time thought of proposing a trial of this so-called cyclical system of collection of revenue in the sandy circles of Marwat; but as a similar proposal for Muktsar was not approved by Government, though the lambardars of Muktsar readily consented, we do not recommend it here, where the people seem to be opposed to it. In its place Mr. Thorburn makes certain detailed suggestions for a more than usual liberality in allowing suspensions and remissions in certain circles

and under certain contingencies. These suggestions appear to me to be very practical and judicious. The assessment is not up to half assets, but we expect that its pressure will gradually reduce most of the poorer Marwats to non-proprietors, unless its annual fixty is relaxed in this way.

Extract of the Assessment Report of Marwat Parganna by S. S. THORBURN, *Esquire, Settlement Officer.*

* * * * *

Opinion on proposed assessment and how to work it.

31. I may bring this report to a close by stating my opinion that I do not consider the assessments too high, provided that either a cyclical system be introduced or suspensions and occasional remissions of demand be made in seasons of drought. In the former case, I think the cycle should be 8, or even 10 years, and not 6 as I wrote to you in my No. 72, dated 10th October last. A better knowledge of the subject and a more careful study of the rain-fall and rise and fall in prices of staples in the last 20 years, have convinced me that, though ordinarily 6 years is a cycle, yet it sometimes is not. The Marwats themselves do not seem to desire a cyclical system, because it would be an innovation, and because they think that by a continuance of the present system they will be gainers. They reason thus:—"Under a cyclical system we shall have no remissions, and be more or less at the mercy of the tahsildar; but under the present system, now that the condition of every village is known, we shall certainly receive remissions in seasons of drought, and the caprice of the tahsildar will affect us less." If a cyclical system be not adopted, I am of opinion that, as a general rule, the annual fixity of demand must be occasionally relaxed, at least to the following extent:—

1.—Failure of kharif crop should at most be a cause for a suspension, and that only for the Pakka Circle (IV).

2.—On failure of one rabi crop, half the annual demand should be suspended.

3.—On failure of two rabi crops in succession, the sum suspended in the preceding year should be

remitted, and another similar suspension be granted.

4.—Except in a very exceptional series of bad years, suspensions alone should suffice for the Pakka Circle (IV.), and none should be required at all for the Nár Circle (VI.), or for irrigated lands of Tandobah Circle (V).,—unless in the case of the *reh* evil greatly increasing, when a reduction of jama will be necessary; but for the other circles and the Thal portions of the Tandobah Circle (V.) remissions will be occasionally required in addition to suspensions. The average annual rain-fall of Marwat is, it should be remembered, only 8·9 inches, or half that of Muktsar, and very little over half that of Yusafzai, with both of which it has sometimes nevertheless been compared.

Extract of a letter No. 1548, *dated Lahore, 7th October* 1876, *from* C. L. TUPPER, *Esquire, Officiating Under-Secretary to Government, Punjab, to the Officiating Secretary to Financial Commissioner, Punjab.*

* * * * *

8. In his 31st paragraph the Settlement Officer makes certain recommendations for the occasional relaxation of the fixity of the annual demand which have attracted the special notice of Sir Henry Davies. These are:—

1.—That failure of the kharif crop should be at most a cause for suspension, and that only in the Pakka Circle.

2.—That half the annual demand should be suspended on failure of one rabi crop.

3.—That on failure of two rabi crops in succession, the sum suspended in the preceding year should be remitted, and another similar suspension granted.

4.—That in the Shiga, Shiga Khatuna and Gadwad Circles, and in the Thal portions of the Tandobah Circle, remissions should occasionally be made in addition to suspensions.

The Settlement Officer adds that, except in a very special series of bad years, suspensions alone should suffice for the Pakka Circle, and that none should be required at all for the Nar Circle, or for the irrigated lands of the Tandobah Circle unless the *reh* evil should increase. These suggestions appear to the Lieutenant-Governor to be judicious, and to contain considerations which he desires may be carefully and continually adverted to by the District Officer in the practical working of the settlement. In bad years wholesale suspensions of the revenue will be necessary, and recoveries should be enforced in good ones. Subject to these remarks His Honor does not wish that any precise rules should be laid down, but the tahsildars should be made fully acquainted with the views of Government on this head.

Extract of a letter from W. M. YOUNG, *Esquire, Settlement Secretary to Financial Commissioner, Punjab, to the Settlement Commissioner, Mooltan and Derajat Divisions, forwarding the Assessment Report of the Mianwali Tahsil, Bannu.* (3)

* * * * *

Annual assessment of villages in river bed of the Indus.

3. In regard to the villages in the Indus bed, the system of annual measurement and assessment has been pursued since the second summary settlement in 1860-61 and 1864-65. The river was at that time shifting from the western to the eastern portion of its bed, hence a reduction has taken place in the jamas of river villages; but as cultivation increased in the "pakka" portion of these villages, and in the central part of the "kacha," the loss has been small. Mr. Thorburn thinks that an error has been committed in applying the annual assessment system to the pakka lands of some villages which were not allowed any reduction on account of diluvion of their kacha lands. This may have been the case; but the persons affected by this measure do not seem to have objected to it; and without examining each case separately, and ascertaining the causes which led to the introduction of this proceeding, the Financial Commissioner cannot say whether it is so indefensible as the Settlement Officer seems to consider it to have been. The total sum added to the assessment of such pakka lands only amounts to Rs. 3,043, and from this must be deducted the amount added in villages where a corresponding reduction was

made on account of diluvion, so the effect has not been great. As it is proposed to extend the fluctuating system to this settlement, the Settlement Officer should distinctly record the conditions under which the villages, containing both pakka and kacha lands, will be annually assessed, to avoid any possible misconception in the future.

Extract of a letter No. 138, *dated Mooltan,* 7*th June* 1877, *from* J. B. LYALL, *Esquire, Settlement Commissioner, Mooltan and Derajat Divisions, to the Settlement Secretary to Financial Commissioner, Punjab, forwarding the above.*

* * * * *

Proposed revenue rates and assessment of kacha lands.

14. The system of fluctuating assessment of sailaba lands which has been maintained in Isa Khel and introduced into Bhakkar, Leiah and elsewhere, has prevailed in the Mianwali Kachi since 1860-61. If the jamas of kacha lands for 1860-61 and 1875-76 (given in the table in paragraph 20) are compared, it will be seen that the elasticity of the system is very necessary in this parganna. After looking through the village note-books I agree with all that Mr. Thorburn says anent his proposed revenue rates and assessments of kacha lands, and recommend them for sanction.

Extract of a letter No. 72, *dated* 7*th September* 1876, *from* S. S. THORBURN, *Esquire, Settlement Officer, Bannu, to the Settlement Commissioner, Mooltan and Derajat Divisions, forwarding the Mianwali Assessment Report of the Bannu District.*

* * * * *

As explained in paragraph 17 of my Isa Khel Report, the alluvion-diluvion system on the Indus in this district is one of great elasticity; for in each cold weather the area cultivated in the preceding kharif, and just sown for the coming rabi, is measured up, the whole assessment on all plots eroded for or found not to have been cultivated or sown is reduced, and all plots newly cultivated are assessed either at the general village rate or according to their class of land, as the case may be. It is, in fact, a kind of direct management system, and it has worked since 1860-61 with advantage to Government and satisfaction to the persons concerned. I subjoin a statement showing my assessment compared with other estimates and jamas.

EXTRACT No. X.

ASSESSMENT OF CANAL-IRRIGATED LANDS IN DERA GHAZI KHAN.

[The Dera Ghazi Khan District was the next after Montgomery for which a system of fluctuating assessment was discussed. But as the plans proposed were not in the end sanctioned or adopted, their mention has been postponed to that of other districts where the method was introduced.—H. C. F.]

Extract of a letter No. 388, dated Sheikh Budin, 13th October 1875, from J. B. LYALL, *Esquire, Settlement Commissioner, Mooltan and Derajat Divisions, to the Settlement Secretary to Financial Commissioner, Punjab, (the review of the Financial Report of the Dera Ghazi Khan District).*

* * * * *

I THINK Mr. Fryer shows clearly that the new settlement is a very light one; the resources of the landholders have increased in a much greater proportion than the taxation; at the same time I think it not too light. The people have greatly improved their style of living, and it would be difficult, if desirable, to make them reduce it again; and, above all, there is the great uncertainty of the harvests: the three great sources of irrigation, the hill torrents in the Pachad, the canals in the Sind, and the floods in the river-side villages are all very liable to fail. In such a district a fixed assessment for a term of years must be light, or it will be sure to break down. I imagine that in this part of the Punjab nature is more opposed to fixity of demand that in any other part of India. I doubt whether we ought to have introduced the principle, except on wells, which often had a fixed cash assessment before annexation. It was not the only possible substitute for the ancient system of collection in kind. In the Pachad a cash assessment might have been imposed on each bánd to be levied only for those harvests in which the bánd got water and grew a crop. This is the system we are about to try in the Daman of Dera Ismail Khan where the landholders have hitherto paid in kind to contractors. In canal lands the revenue might have been collected by differential crop rates and annual measurements, as is now done in Dipalpur. In the river-side villages also there might have been fixed acreage rates for sailaba cultivation, that is, for land watered by floods, but the demand might have varied according to

the area annually cultivated. This is a system which has prevailed in one or two places, and which we have lately proposed to try in others where the fixed assessment has broken down.

If these systems had been introduced in Dera Ghazi Khan at annexation, Government would, I think, have obtained a larger revenue, and the people would not have been so deep in the money-lender's books as many of them now are. On the other hand, prudent and energetic men would not have had the same opportunities of making their fortunes which they have had under the system of village assessments fixed for a term. Larger establishments would also have been necessary, and District Officers would have had to devote a great deal more time to the subject of collection of the revenue than they have hitherto done, and for some time a good deal of peculation would have been successfully attempted. It was the difficulty about establishments and supervision, coupled with the preference for a fixed assessment expressed by all the leading men among the landholders which determined us against a change of system at this settlement. In the face of these obstacles, and of the fact that it seemed possible to secure a fair increase of revenue under the existing system, it did not seem advisable to try experiments in a frontier district. . . .

Extract from the Settlement Report of the Dera Ghazi Khan District, in the Derajat Division, effected by F. W. R. FRYER, *Esquire, B. C. S.*

* * * * *

Objections of the irrigators to the present system.

367. The irrigators complained loudly of the excessive demand made from them on account of water rate, and declared that they were in reality, though not in name, paying an "abiana" of the same description as the "abiana" paid in other districts of the Punjab.

Besides, this the people strongly objected to having to submit to annual measurements made with a view to determine the "abiana" demand. Annual measurements, however fairly made, were considered by the people an infliction; and the annual measurements, which were made by a temporary establishment entertained for the purpose by the Canal Department, were said to be made use of by the measurers for purposes of extortion.

368. The Financial Commissioner suggested to the Settlement Commissioner the feasibility of introducing into the Dera Ghazi Khan District the method of assessing canal-irrigated lands which has been introduced into the Dipalpur Tahsil of the Montgomery District. He proposed that the half cost of canal clearance should be included in the land revenue, and that it should be shown as a matter of account what proportion of the land revenue was due to land-revenue proper, and what to canals. The Financial Commissioner proposed that this consolidated revenue should be realized by an acreage rate, and that annual measurements should be made to ascertain the area irrigated. This seemed to the Financial Commissioner the only way of realizing a full revenue without risk of breaking down the villages.

Proposed method of assessing the canal-irrigated lands of this district.

The people met this proposal with strong objections. They disliked the idea of annual measurements and fluctuating assessments. To meet these objections the Settlement Commissioner suggested that if the share of revenue due to wells and to barani or unirrigated cultivation were shown separately from the share due to canals, annual measurements would not be necessary, as in case of proved failure of canals that proportion of land revenue which was due to canals might be remitted.

369. There is no barani cultivation strictly so called in the Chahi-nahri circles. The only cultivation that could be so classed is either "sailab" or "rod kohi," which two descriptions of land are influenced by river and hill-stream irrigation respectively. It would on this account have been necessary to assume a barani rate, and it was difficult to apportion the share of land revenue due to canal irrigation separately from that due to well irrigation. Besides this the people were, as I have said, opposed to annual measurements, and it was doubtful whether the existing district, tahsil, and patwari establishment could undertake extra labor which would be devolved upon them by a system which would render one-third of the cultivated area of the district, upon which half the total land revenue is dependent, liable to annual measurements. These considerations led me to adhere to the existing system of fixed assessment, and the Settle-

Objections to methods of assessment proposed.

ment Commissioner was, after consideration, of the same opinion. I further proposed to fix the charge on account of the half cost of canal clearance, and include it in the land revenue for the term of settlement.

Plan of assessment adopted for canal-irrgated lands.

370. When the Officiating Financial Commissioner, Mr. Melvill, visited this district in February and March 1873, in order to review my proposed assessments, he, after consulting the Commissioner of the Division, the Settlement Commissioner, the Deputy Commissioner, the canal officers, and myself, came to the conclusion that the method of fixed assessments was the best suited to this district. This was the opinion of all the civil officers consulted, but not of the two canal officers. The Local Government at first refused to accept a fixed annual sum for clearance charges, or to sanction the discontinuance of annual measurements for the purpose of levying an acreage rate for providing half the cost of clearance; but finally it was resolved by His Honor the Lieutenant-Governor, when he visited the district in December 1873, that a lump sum of Rs. 45,000 per annum should be assessed and collected over and above the land revenue, and accepted in lieu of an acreage rate. The amount of this fixed half clearance charge should be subject to reconsideration at the end of five years. Measurements of the canal-irrigated area should still, it was resolved, be made annually for statistical purposes, but they should be carried out by patwaris if fitted for the duty. The sum of Rs. 3,000 per annum, which the Canal Department had previously expended on measurements, is now to be distributed amongst the patwaris as an additional allowance.

Part of the revenue of canal-irrigated lands credited to the Irrigation Department.

371. A system of fixed assessments has now been sanctioned. A portion of the revenue derived from canal-irrigated lands has been assigned to the Canal Department as a matter of account. The cultivation of Chahi-nahri lands does not altogether depend upon canals, as rabi crops can be raised by well irrigation. The cultivation of "banjri," lands depends solely upon canal irrigation. Two-thirds of the revenue of Chahi-nahri lands and the whole of the revenue of the "banjri" lands have accordingly been credited to the Canal Department, in addition to the Rs. 45,000 which represent the half cost of clearance.

EXTRACT No. XI.

PROPOSAL FOR A CYCLICAL SYSTEM IN MUKTSAR, FEROZEPORE.

[For the Muktsar tahsil of the Ferozepore district a system of cyclical assessment was proposed, but was not sanctioned. As this was the first definite proposal of the kind in the Punjab, the following extracts from the correspondence on the subject are given here.—H. C. F.]

Extract paragraph 6 of MR. PURSER'S *Report on the Detailed Assessment of Muktsar, Ferozepore.*

I THINK the new jamas will be found to press heaviest in the Rohi Chak and in the Muhammadan villages to the north-west of Muktsar Khas. As far as I could ascertain, about three-fourths of the villages were contented with the jamas, and the rest were not. I explained to the principal men the plan proposed by His Honor the Lieutenant-Governor in paragraph 61 of the review of the last Revenue Report, of having the jama of a cycle of years fixed, but varying the amount collected each year with reference to the character of the seasons. They entirely approved of it, and I consider it might be introduced into Muktsar with the greatest advantage. The benefits conferred by it on the people are obvious.

Paragraphs 4 and 5 of MR. LYALL'S *Note on the above, forwarded with his No. 12½, dated 4th April 1874, to Secretary to the Financial Commissioner, Punjab.*

* * * * * * *

4. With reference to these great variations in the value of the out-turn of the crop, Mr. Purser in his 6th paragraph suggests the introduction of a new system of collection in Muktsar. The novelty in it amounts really to not much more than this, that it gives the Deputy Commissioner, who at present only has power to suspend, power also to collect in advance. The jama of a village would be a sum payable in a cycle of years, not in one year. For example, take ten years as the cycle for Muktsar and a village now assessed at Rs. 100 per annum. The jama of the village would be

Rs. 1,000 payable in ten years in instalments of, say, from Rs. 80 to Rs. 10 per harvest, according to the quality of the crop.. The Deputy Commissioner might be told to collect at the following rates :—

For a good harvest	(above 12 annas)	...	Rs. 80
For a fair do.	(do. 8 do.)	...	„ 60
For a poor do.	(do. 2 do.)	...	„ 40
For a bad do.	(2 annas or less)	...	„ 10

At a rough guess there would probably be in a cycle of twenty years, five good, six fair, five poor, and four bad harvests or total failures of crop. So that if the Deputy Commissioner collected at the above rates, he would collect the full Rs. 1,000 in the cycle. Towards the end of the cycle, if the Deputy Commissioner found the village had a good deal left to pay, he would take the higher rates, whether the harvest was quite up to the mark or not, so as to ensure the collection of the whole jama in the cycle. But of course if there had really been an unusual prevalence of bad harvests in any ten years, it would be a good ground for remissions.

5. In my opinion, the system might be tried with advantage in the Rohi circles of Muktsar: it would certainly tend to keep the zamindars from getting deep in the books of the money-lenders, and I do not see that it ought to be hard to work. The crop in these tracts does not vary much from village to village; if there is a good crop in one village, there is an equally good one in all, or in all but those in some particular corner which the clouds may have avoided. The general character of the crop, good, bad or indifferent, is easily ascertained.

Extract of a letter No. 818, *dated Lahore, the 8th July* 1874, *from* W. M. YOUNG, *Esquire, Officiating Secretary to Financial Commissioner, Punjab, to the Officiating Secretary to Government, Punjab.*

* * * * * * *

4. *Tahsil Muktsar.*—The jama proposed in the Settlement Officer's assessment report was Rs. 97,877; the amount as announced was Rs. 98,330. This is due to a modification in the rates which was found advisable. Where they were raised no dissatisfaction has been expressed; whereas after a reduction of 5 per cent. in the "rohi," or

upland, circles, discontent was not entirely allayed. Still in no case has the jama been finally refused, and no appeals have been preferred. The Officiating Settlement Commissioner thinks the jamas will work well. The system by which the jama of a village is payable in a cycle of years, an amount being levied each year according to the crop, which is in accord with the suggestion of His Honor the Lieutenant-Governor contained in paragraph 61 of the review on the Revenue Administration Report of 1871-72, is recommended for adoption in the "rohi," or upland, circles of this tahsil by Mr. Lyall. Mr. Egerton does not think it necessary to depart in this tract from the mode of collection which has hitherto prevailed. The assessment has been fixed at a rate which can be ordinarily paid with ease, and he does not wish to give the Deputy Commissioner power to collect in advance in good years; and he thinks that in no possible way can the necessity of giving relief in exceptionally bad years be avoided with a money assessment.

With reference to the latter portion of paragraph 6 of Mr. Lyall's note on the assessments of this tahsil, Mr. Egerton observes that a medium crop has been taken by Mr. Lyall as the basis of his calculation of the Government demand.

The use of the term "medium crop" implies that an average of some kind has been taken, but the steps by which that average is obtained have not been detailed. Mr. Lyall objects to the Financial Commissioner's method of calculation as likely to mislead. What the Financial Commissioner stated generally in paragraph 9 of his note on Muktsar assessments was, that if instead of one-sixth of an average year one-sixth of the average for 17 years were taken, with the help of the table given in paragraph 60 of Mr. Purser's report the result was nearly what Mr. Purser proposed to take.

The Financial Commissioner preferred taking a specified share of the average of the whole period of 17 years, to making a calculation to find what an average year was, and then taking that for a datum.

Of course it is possible by assuming the fair or medium crop higher or lower, to make Mr. Egerton's mode of calculation appear fallacious; but it is not necessarily so, and,

inasmuch as it does not conceal any part of the calculation, it is, Mr. Egerton, thinks, preferable to that which the Settlement Commissioner thinks the best. As both methods are merely modes of calculation, it would not have been necessary to notice the question here if Mr. Lyall had not desired that the standard used in assessing Muktsar should be recognized and sanctioned as a guide for district officers in recommending remissions or suspensions. Year by year the Deputy Commissioner will have increased knowledge of the outturn of the crops to guide him; adding the results of these years together, and taking the average, will yield more reliable results for purposes of comparison than the assumed medium crop.

The number of years of each class in which the yield was good, fair, indifferent, bad or nil, can be classified, and if the calculation is made with ordinary care, the accuracy of the average will continually improve. Mr. Egerton thinks, therefore, that it is less likely to mislead if the share of Government produce is stated to have been a definite portion of the average yield of a number of years than if it is called a certain definite proportion of a medium crop.

EXTRACT No. XII.

ASSESSMENTS IN ROHTAK.

[This district, like all the Hissar Division, is extremely liable to famines and droughts of which three severe ones have occurred since 1857. The necessity of a more elastic revenue system in the way of granting suspensions in seasons of distress has therefore been strongly dwelt on by Settlement Officer in the following extracts.—H. C. F.]

Extract paragraph 84, *Part VI., from the Assessment Report of the Gohana Tahsil in the Revised Settlement of the Rohtak District,* 1873—1879, *by* H. C. FANSHAWE, *Esquire, Officiating Settlement Officer.*

* * * * * * * * *

Suspensions.

84. And in view of the present season, I may say that the revenue assessed on the rain-land villages is too high to be realised without suspensions in cases of total failure of the crops of any harvest. I believe that it would be impossible to pitch any revenue so low that it could be collected at all seasons in this country without sacrificing the Government revenue most unnecessarily. Rohtak is emphatically a tract unsuited for a too rigid revenue system. With sufficient rain the crops grow with extraordinary facility and luxuriance, while in a season of drought not even a blade of grass remains on the country side. Hardworking as they are, the Jats are a very thriftless people, and if they do not waste the gains of a good year on marriages, they probably invest them in cattle, only to see them die when a famine comes. It must be remembered that the population is too dense to allow large stores to be put aside for a season of want. It is the fashion to run down the Indian ryot very unfairly in this respect: let any one look at the list of bankrupt farmers at home after two bad seasons, and guess what would be the case had two crops entirely failed or never been sown. When we see a mining population, whose men earn on an average in two months all that a ryot does in a whole year, brought to the verge of starvation by an eight-months' lock-out, it can hardly cause surprise if the agriculturalist here is unable to live for a year and a half on the produce of a single harvest. I can only repeat that suspensions of revenue will always be necessary in years when the crop fails, and that these rates are pitched as high as they are on the supposition that such suspensions will be freely given. Is it not possible that a system of charging 5 or 6 per cent. on the suspensions up to

date of payment could be introduced? The people at least would readily hail it, as it would save them from borrowing the money suspended at at least 18 per cent. interest from their traders.

Extract paragraph 68, *Part VI., from the Assessment Report of the Rohtak Tahsil in the Revised Settlement of the Rohtak District*, 1873—1878, *by* H. C. FANSHAWE, *Esquire, Officiating Settlement Officer.*

* * * * * * * *

Suspensions hereafter.

68. The remarks which I have made concerning the suspensions of revenue in Gohana bear a much more intensified force as applied to Rohtak. If, with the light revenue then existing, large suspensions and remissions were made in 1862-63 and 1868-69, it is certain that still larger suspensions will have to be made in famine years henceforth. Even if we were to reduce the existing revenue of Rs. 1,78,660 to Rs. 1,50,000 it would be most unwise, if not impossible, to collect it after two harvests have completely failed. Transferred to us only 20 years ago, less is probably known as to the special peculiarities of the districts of this division than of any part of the Punjab. The soil is exceedingly fertile in seasons of good rain, and occasionally, as in 1875-76, a crop is reaped which will suffice nearly for two whole years, but in seasons of drought the very grass disappears from the face of the earth. At least two-thirds of the villages of the tahsil date their refoundation from the terrible "chálisa" (1780-83 A. D.): even now population varies considerably according to the seasons, and a famine shakes strongest even of the communities to their very foundation. Strenuous as he is in work, the Jat sadly lacks sense and forethought. It will always be necessary to grant suspensions of revenue in years when both harvests fail, and they should be granted unstintingly. The recovery of the balances should be gradual, say over four harvests, and perhaps 5 per cent. interest might be charged on balances up to date of payment. A rigid revenue system is quite unsuited to this tract, and the unappreciative insistence of such a system may work vital harm at any time. It cannot henceforth be laid down, as a broad rule that the revenue is so light that its collection should be insisted on: we may need to teach the people thriftiness and forethought, but we shall hardly do

so by a rigid revenue demand which plunges him into liabilities seldom shaken off afterwards. My proposals are distinctly on the basis that suspensions will be freely granted in all such years as the present is, or 1862-63 and 1868-69 were.

Extract of a letter No. 21S.C., dated 21st June 1879, from the Settlement Secretary to Financial Commissioner, Punjab, to the Commissioner and Superintendnt, Hissar Division.

* * * * * * * *

Suspensions should be given in years of drought.

11. The Additional Financial Commissioner fully concurs in Mr. Fanshawe's remarks in paragraph 68, and his view that the Settlement Officer's rates should be accepted is based on the assumption that suspensions will be freely granted in years of agricultural distress. He is in favor of levying interest (even higher than 5 per cent.) on balances, in order to thus avoid placing the provident on a level with the improvident land-owner, and also to constitute a self-acting check on unreasonable demands for suspension. Such a check is, he thinks, needed: it will help to obviate the dangers of unnecessary suspensions which might arise in districts controlled by inexperienced or too facile revenue officers.

Digitized with financial assistance from

H T Parekh FOUNDATION

An Initiative by HDFC

WITH YOU, RIGHT THROUGH

on 10 January, 2019